THE GENESEE FARMER

Vol. XIV. ROCHESTER, N. Y., OCTOBER, 1853. No. X.

AGRICULTURAL ENTOMOLOGY.

Entomology is that department of natural history which treats of insects. Agricultural entomology limits its investigation to such insects as injure the field and garden crops, household possessions, orchards, forest trees, and domestic animals of farmers and gardeners. The number of species that subsist mainly or entirely at the expense of cultivators, is much larger than one would suppose who had not made these destructive animals and their ravages the subject of particular study. Baron Kollar, following generally the arrangement of Latreille, treats of insects injurious to agriculturists under twelve orders. Dr. Harris is less comprehensive in his plan, confining his treatise to insects injurious to vegetation; but he is more thorough and practical, so far as he goes.

Having on another occasion briefly described the twelve orders of Kollar, we shall now attempt a definition of the six orders, to the discussion of which Dr. H. has devoted an octavo volume of some 500 pages. The names of these orders are: *Coleoptera*, *Orthoptera*, *Hemiptera*, *Lepidoptera*, *Hymenoptera*, and *Diptera*. Before proceeding to describe the several orders named, it may not be amiss to state that the word "insect" is derived from the Latin *insecare*, to cut into, or notch; most insects being almost severed at the points where the head is joined to the thorax, and the thorax to the abdomen, as in the ant and honey-bee. Insects do not breathe through their mouth, but have several air holes called spiracles on each side of their bodies, usually nine in number, for the free ingress and egress of the atmospheric air, needed to purify their blood. The brain of an insect is small; and instead of a spinal marrow, a kind of knotted cord extends from the brain to the hinder extremity; and from the knots on this cord and the brain issue numerous small, whitish threads, which are nerves, and spread over the animal system. A few water insects breath by means of gills. The heart is a long tube lying under the back, having little holes on each side for the admission of the juices of the body, which are prevented from escaping again by valves or clappers, formed to close the holes within. By the appropriate arrangement of valves, the blood flows toward the head, and is prevented from passing in an opposite direction. The blood is either colorless or a yellowish fluid, and does not circulate in proper arteries and veins; but, being driven to the head by the contraction of the tubular heart, it is discharged into the fluids derived directly from the digestive organs, and is again oxygenated by contact with the air pipes, and finally it returns into the tubular heart for continued circulation. Insects have no internal skeleton like the *vertebrata*.

Order 1. *Coleoptera*. The word chosen to designate insects of the first order is formed from *koleos*, a sheath; *pteron*, a wing. [We have no Greek type.] The idea conveyed is, that all insects of this order have their wings in a sheath, or more properly

under wing-covers. Beetles, of which there are over four thousand species known, belong to this order. Beetles are not *bugs*, although often called such. They have jaws for biting, and are nothing lothe to use them for that purpose. Bugs (*Hemiptera half-wingers*) take their food by suction through a beak or rostrum, and differ from beetles in other respects. Under the two thick wing-covers which meet in a straight line on the back, beetles have two filmly wings that fold transversely. Their larvæ are grubs, and generally provided with six true legs, and sometimes with a terminal prop-leg; more rarely without legs. The pupæ have wings and legs distinct and unconfined. Many of these insects, particularly in the grub state, are very injurious to vegetation. The grubs which so abound in dead and living forest trees are mostly the young of beetles.

Order 2. *Orthoptera* (cockroaches, crickets, grasshoppers, &c.) *Orthoptera* is derived from the Greek *orthos*, straight; *pteron*, a wing. The wings of this order are four; two rather thick and opake upper wings, overlapping a little on the back, and two longer thin wings, which are folded in plaits like a fan. Transformation partial; larvæ and pupæ active, but wanting wings. All the insects of this order, except the camel cricket (*Mantidiæ*), which prey on other insects, are injurious to our household possessions, or destructive to vegetation.

Order 3. *Hemiptera* (bugs, locusts, plant-lice, &c.) To this order belong insects with a horny-beak for suction; four wings, of which the uppermost are generally thick at the base, with thinner extremities which lie flat and cross each other on the top of the back, or are of uniform thickness throughout, and slope at the sides like a roof. Transformation partial; larvæ and pupæ nearly like the adult insect, but wanting wings. The word *Hemiptera* is derived from the Greek *hemisus*, half, and *pteron*, a wing, half-winged insects. The outer wings are often half horny and half membranaceous; and in some species shorter than the body, or entirely wanting, as in the bed-bug.

Order 4. *Lepidoptera* (butterflies and moths.) Insects of this order have a mouth with a spiral sucking tube; wings four, covered with branny scales. Transformation complete. The larvæ are caterpillars, and have six true legs, and from four to ten fleshy prop-legs. Pupa with the cases of the wings, and of the wings indistinct and soldered to the breast. The word *Lepidoptera* is derived from *lepos*, a scale (like that of a fish); *pteron*, a wing. The white, mealy substance that adheres to the fingers when butterflies and moths, or millers are handled, is composed of minute shining scales. Butterflies extract nectar from flowers by their long flexible sucking tubes.

Order 5. *Hymenoptera* (sawflies, ants, bees, &c.) Insects with jaws; four-veined wings, in most species, the hinder pair being smallest, and a piercer or sting at the extremity of the abdomen. Transformation complete; larvæ mostly maggot-like, or slug-like, of some, caterpillar-like; pupæ with legs and wings unconfined. The word *hymenoptera* is derived from *hymen*, a membrane; *pteron*, a wing — meaning insects with membranaceous wings.

Order 6. *Diptera* (mosquitos, gnats, flies, &c.) Insects with two wings only, having a horny or fleshy proboscis, and two knobbed threads called balancers, or poisers, behind the wings. Transformation complete. The larvæ are maggots without feet, and with the breathing-holes generally in the hinder part of the body; pupæ mostly incased in the dried skin of the larvæ, sometimes, however, naked, in which case the wings and legs are visible, and more or less free and unconfined. The word *diptera* is derived from *dis*, two, or twice, and *pteron*, wing; two-winged insects.

We shall give one or more articles on each of the above orders, and endeavor to explain the economy, and suggest ways and means for destroying these pestiferous animals. They destroy every year more than twenty million dollars' worth of property.

AGRICULTURAL STATISTICS.

THE following remarks, which have appeared in the *Mark Lane Express* and *London Farmers' Magazine*, may interest some of our readers:

The agriculture of the Union has been less affected by external influence than that of Canada, and more from internal energy—owing, no doubt, to the difference of the political relation between them and the mother country, coupled with the growth of their respective populations, the tide of emigration rolling principally into the boundless prairies of the former. Some of the older States, as New York, for instance, are densely populated, compared with Canada, and have proved an example to the other States where the growth of society and civilization has been less. Hundreds of thousands of emigrants have left the mother country with no other idea of destination than to get to New York—once there, they would work their way into the interior as Providence might direct their steps. Hence labor, an article of no small value in America, was more plentiful in that State than in the others, creating a larger consumption and better markets—circumstances of the highest importance to its agriculture, as they afforded the means of reclaiming its soil and saving a little independence. Many of the early settlers in this State, although landing poor, acquired capital sufficient to enable them to purchase estates for their families.

But while an abundance of labor aided the progress of agriculture in this and older States similarly situated, it was the means of sooner exhausting their soils, owing to the scourging system followed, bringing their farmers, as it were, to a stand-still—a fact which has lowered them in the estimation of emigrants for nearly the last half century. "Human toil is often praised for being highly *productive*," says Dr. LEE, an American writer, alluding to the question at issue, "when, had the whole truth been known, it would have been seen to be remarkably *destructive*," as the counties of New York have experienced; for the exhaustion of their soils have not only lowered them in the estimation of emigrants, but of their own old settlers, many of whom sold out as soon as they could find a purchaser, betaking themselves to the bush husbandry of the interior, beginning the world afresh as they or their forefathers did.

The rights of the public, we have said, embrace agricultural statistics—a subject on which the American farmers and Congress appear more united than the English, and one in which they place more importance, obviously because they take a more sound, comprehensive, and practical view of it, attributing even the exhaustion of the soil to the want of the necessary statistical information; for, say they—quoting official authority, the Report of the Commissioner of Patents—"Good and bad farming are now so blended, that delinquents escape all exposure; while such as do well, are denied that distinction which is the just reward of merit. There is no resisting a legitimate argument, sustained by conceded facts. Mistakes in practice, and errors in theory, must give way before the light of truth: and the truth alone should be diligently sought and widely disseminated among the farmers of the Republic." In short, it is not merely the number of acres and the amount of produce which comprise American statistics—for they include *the number of good and bad farmers* also. For example:

Of the 12,000,000 acres of improved lands in the State of New York, 1,000,000 are so cultivated as to become richer from year to year—being in the hands of 40,000 farmers who read agricultural journals, and nobly sustain the State and county societies of that commonwealth. Three millions barely sustain their fertility, and are cultivated by a class of farmers who *read not*, but do their best to follow the practice of the last. 8,000,000 acres are in the hands of 300,000 cultivators who follow the old practice of exhausting the soil, which has fallen from 30 to 5 bushels of wheat per acre—Albany county, in 1845, producing only 7½ bushels per acre; Duchess county, 5; Columbia, 6; Rensselaer, 8; Westchester, 7, &c.; while Albany, in 1775, produced from 20 to 40. The 300,000 persons that cultivated those 8,000,000 acres produce each annually 25 dollars less than they would have done had the land not been exhausted. There is no escape from this oppressive tax of 7,500,000 dollars, but either to improve the land at an expenditure of 100,000,000 dollars, or run off and leave it. It is calculated that Maryland, Virginia, North and South Carolina, and Georgia, have lost the equivalent of 500,000,000 dollars by exhaustion of land.

It is not merely statistics generally as above, but individually as follows: "There are samples of wool in the Patent Office, the product of a sheep that yields 18 lbs. of washed wool a year, and weighs 420 lbs. This mammoth sheep is the property of Colonel JOSIAH WARE, of Clarke county, Virginia, whose best fat wethers sell at 35 dollars a head." Other examples are given where flocks which once yielded 5 lbs. per fleece, have now fallen to 2 lbs., &c. The great WASHINGTON'S fell from 5 to 2¼ lbs. during his wars.

The rights of the public, however, involve more than statistics; for if the soil has been exhausted, it has a right to know the cause and remedy, as well as the amount of exhaustion: but, while it obviously enjoys this privilege, it has also its duties to perform toward the farmer. Hence for the last eight or ten years the American Government has been collecting all the information which the improvement of its agriculture demands, not only from individuals of the greatest talent in its own provinces, but from all corners of the world, through the instrumentality of its Patent Office, which collates and arranges the whole in the shape of an annual report of some six hundred

octavo pages, for circulation among farmers, who have fully appreciated its value with gratitude; for the effect produced is far beyond the most sanguine expectation previously entertained from official information of this kind. From time immemorial the American farmers have enjoyed the benefits of State and county societies—cattle, implement, and produce shows—with plowing matches, and such like machinery, the same as English farmers have done—besides companies for the importation of English cattle. But such was found insufficient, never having produced in half a century the effect which the Patent Office has done in one season; because through it the progress of chemical and mechanical science is brought to bear upon the different branches of agriculture with a different force and a different interest to the farmer.

The Union has justly been termed "*a nation of farmers*," farmers forming "a large majority of the voters," so that they have themselves to blame if their interests are neglected, either in Congress or State Legislatures. Hence, however, they may have hitherto under-estimated the advice of WASHINGTON, who was himself a farmer, and strongly advocated the cultivation of agricultural science, they have now caught the true spirit of their great president, and are exerting every nerve to reduce it to practice without fear of opposition, and the progress they are making is only equalled by the magnitude of the work before them. Complaints are no doubt yet many, but no sooner established than the necessary steps are taken to have them redressed. The rights of American laborers have hitherto been sadly neglected; for half their number are slaves, while the domestic happiness of the other half has been little cared for! The plight of the poor emigrant, who has hitherto arrived in the Union with an empty pocket, was sober indeed. In this country our large manufacturers—a class ever alive to their own interest—are beginning to descry a short supply in the labor market. Hence cottages and gardens for their operatives are fast being built, and every other prudent means used which the circumstances of the case demand; but in America, although labor has been scarce, no such effort has been made to induce the surplus rustics of our overflowing provinces to emigrate; for to them the threshhold of colonial life has been truly purgatorial: indeed, such was its barbarous character, that few penniless laborers, however indifferent they might be to civilized life, ventured to cross the Atlantic unless they had either a friend or relative before them. Happily, however, the American Patent Office has at length succeeded in removing the farmers' candle from under the bushel. Chemical and mechanical science, involving the proper application of labor to the soil, is now becoming better understood, so that the domestic comforts of the laborer are beginning to be cultivated. Hence the stimulus which it has given to the "exodus" at home.

Such are a few desultory observations on the means now being used by the Americans to improve their agriculture. In the language of the Patent Office Report, "To compete with Englishmen in feeding people at their own doors, while Americans have to transport their breadstuffs and provisions from 3,000 to 4,000 miles to reach the consumer, is obviously a hard business for our farmers." It is one, however, which the American is strenuously and successfully pursuing; and let us, therefore, not be found sleeping at our posts in the conflict, since we cannot avoid joining issue in it.

We hope that we may say without egotism, that the Patent Office Report so favorably noticed abroad, and especially all the facts and figures quoted therefrom, were from the pen of the person named therein, who has often brought the great subject of Agricutural Statistics before the American public. The bill (which became a law) for taking the census of the State of New York in 1845, as well as the blank schedules for agricultural statistics, by which the yield per acre was ascertained, originated with the proprietor of this paper, as chairman of the committee on Agriculture; but so little has been accomplished compared with what ought to have been done, both at Albany and Washington, that we have more reason for regret than to be proud of the result. It has long been a source of deep pain to us, that it is not possible to obtain a patient hearing of the important facts relating to agriculture in this country. Our countrymen are most unwilling to have the fact demonstrated before their eyes that "Human toil is often praised for being highly *productive*, when, were the whole truth known, it would be found highly *destructive*."

If the Legislature had adopted the statistical policy which we recommended in 1844, after years of patient observation and study, all would now know in this State who are dealing justly by the soil they cultivate, and who are not. We complained in the Patent Office Report for 1849 that "good and bad farming are now so blended that delinquents escape nearly all exposure, while such as do well are denied that distinction which is the just reward of merit." Is not this true? and does it not serve to repress improvement in tillage and husbandry? In our humble opinion, agricultural statistics should be collected every year to be of essential value to agriculture. Assessors, or tax-col-

lectors, might obtain the needed information in every State at a trifling expense, and the facts so ascertained would soon develop truths of the greatest importance.

The guessing system of miscalled statistics, so long in vogue at the Patent Office, we exploded four years ago, and still cherish the hope that State Legislatures may ere long take measures to learn something of the true principles of good husbandry; and we again repeat, what we have said a thousand times before, "To compete with Englishmen in feeding people at their own doors, while Americans have to transport their breadstuffs and provisions from 3,000 to 4,000 miles to reach the comsumer, is obviously a hard business for our farmers." Our meaning is, that it is hard to draw so largely and continuously on the natural resources of the soil and not impair its fruitfulness, and ultimately impoverish both the land and its cultivators. American statesmen overlook this paramount land and bread question. Educated farmers must become practical statesmen, and take the lead in legislation, before either agriculture or political economy can be placed on a sound and enduring basis.

FALL PLOWING.

Having some twenty odd acres we intend planting to corn next spring, the question comes up in a practical way, What will the soil gain in the available food of plants by plowing it this fall? On light sandy or gravelly soils we doubt the propriety of plowing several months before the seed is committed to the earth, because we fear that the elements of both organic and inorganic matter rendered soluble by tillage may be washed out of the open ground, and the land impoverished rather than enriched by fall plowing. We have no doubt of the fact that tillage often operates greatly to the injury of the soil, sometimes by dissolving the food of plants prematurely, so that a part is lost by the washing of the plowed earth long before it is planted or sown, and other times the fine clay and sand run together and become hard before spring, so that the labor of fall plowing is lost. These remarks are made to show that there are two sides to the question of autumn plowing for seeding in the spring. Soils which are either very open, or very compact from an excess of fine clay, gain little by stiring them long in advance of planting. Frost, however, may and often does, operate to improve clay land by rendering it more friable, if plowed in the fall or winter. This is particularly true of clayey loams, soils that do not run together like potter's clay. Clay soils which are not benefitted by fall plowing, nearly always need underdraining to increase their porosity and friability. By throwing the ground into beds when plowed, and opening a deep water furrow between each land, much may be done to prevent the soil from becoming very hard in dry weather, and mortar in wet weather. Undoubtedly autumn tillage saves field labor in the spring, when one's teams may not be in the best possible condition for service, while a great deal of work is suffering to be done. Had we plenty of good teams and laborers, we should rarely plow any field more than four weeks before it was to be sown or planted.

So soon as tillage develops the elements of fertility, and rains fall to dissolve them, our notion is, that the seed should be in the ground to grow and consume the raw material of the crop. We are well aware of the recent researches of Prof. Way and others, showing the retentive power of soils in preventing the loss of manures applied to land in a state of solution; we are not, however, satisfied that expectations in that matter are to be fully realized by farmers. Mr. Mechi says that his liquid manure, after passing through several feet of soil, still contains both organic and inorganic matter; and we know that in all good land, rain-water that comes out in springs and wells is not *pure*, but abounds in both vegetable and mineral salts dissolved out of the

ground. Tillage increases the solubility and solution of these substances, which are the food of plants; and hence tillage at the time of planting and afterwards augments the feeding and growth of crops.

Having decided to plow a field in the fall, we should not hesitate to break up the subsoil a little deeper than it was ever before exposed to the light, heat, frost, and atmospheric gases above ground. These are powerful chemical agencies, and admirably adapted to deepen and improve a soil. If one can turn under a good coat of grass, weeds, mold, or manure, so much the better for the land. Break the ground fine—that is, cut narrow furrows, as well as deep ones, that the tillage may be perfect.

INTERESTING EXPERIMENTS IN PORK-MAKING.—The *Irish Farmers' Gazette* contains an interesting experiment in fattening hogs by feeding one lot on cooked turnips and barley meal, and another on raw turnips crushed, adding meal, and permitting the mass to ferment before being fed. There were four hogs in each lot. Those fed on cooked turnips weighed, when the experiment commenced, on the 27th November, 1852, 816 pounds. This lot were fed three times a day, and consumed 280 pounds daily, steamed and mixed with 12 lbs. of bran and barley meal. In thirty-nine days they had gained an average each of 103 lbs., or an aggregate of 412 lbs. To produce this gain there were consumed 9,920 lbs. of turnips, and 468 lbs. of bran and barley meal. The other lot of four hogs weighed, at the commencement of the experiment, 792 lbs. They, too, were fed three times a day, and consumed 140 lbs. pulped turnips, fermented and mixed with 12 lbs of bran and meal. It will be seen that the hogs fed on raw turnips consumed just half the quantity given to the others, while they gained an average each of 110 lbs, and 28 lbs. more than those fed on cooked turnips. In cooking the latter, just a ton of coal was consumed in the thirty-nine days. How the turnips were crushed to a pulp is not stated; it might be done in a bark-mill, or other machine made for the purpose. The pulped turnips, bran, and meal stood three or four days before feeding. Each tub had an orifice in the bottom for a part of the water in the turnips to run out into troughs, which otherwise was found to check the fermentation. The liquor received in the troughs was fed to young pigs. We suspect that turnips naturally contain too much water (over 90 per cent.) to fatten hogs economically. A part of the nutritive element in the turnips passes out of the system by the bowels, and a part from the thin blood, by the kidneys, dissolved in an excess of urine. A little less of the roots, and more barley, oat, or corn meal, would be cheaper and better feed.

WASHINGTON AGRICULTURAL INSTITUTE.—It is known to our readers that the Mount Vernon estate, the home of WASHINGTON, has recently been contracted to a company at the round sum of $200,000, with the reservation that if Congress shall decide to purchase at the same price, it is to be transferred to the Government. Public sentiment has been directed to the subject in a considerable degree since this proposition was made public, and we think there has been a very general approval of the project of purchase by the Government. Should this question be settled affirmatively by the next Congress, the question will then arise as to the disposition which shall be made of the grounds, and in what manner they shall be improved. With a proper system of management and appropriate improvements, Mount Vernon might become a great place of resort for all who revere the memory of the Father of his Country.

Among the propositions submitted through the public press, is one from the *Rochester American* which seems to merit more attention than has been given to any other suggestions we have seen upon the subject. We quote from that paper as follows:

"It is well known that the profesion which WASHINGTON loved above all others was that of the farmer. He pressed upon the attention of Congress in his last annual message the importance of agriculture, and the duty of Government to promote its improvement by proper pecuniary assistance. For reasons that we need not discuss, the wise and patriotic suggestions of the illustrious Farmer of Mount Vernon in behalf of agriculture were never acted on by an American Congress, and the sciences of tillage and husbandry have never been fostered in the United States. We can not believe that this general neglect of the study of agriculture is much longer to continue; and if a beginning is ever to be made for the solid advancement of rural knowledge, it is eminently fitting

and proper that the first institution established for that purpose should be on the farm of WASHINGTON. Agriculture is an experimental science; and yet there is not one acre of land in the whole republic exclusively devoted to experimental purposes. Congress has been publishing annual reports on rural affairs, emanating from the Patent Office, for the last ten years, and who can name one new fact which Government has developed, calculated to make two blades of grass grow where one grew before? Congress has caused no agricultural experiments to be made, has revealed no new truth, nor elucidated one doubtful practice in any department of husbandry or tillage. There is no lack of agricultural journals and book-publishers to print and circulate all really valuable information that may be called into existence by scientific researches. Hence, instead of expending so many thousands of dollars in needless printing, Congress should be instructed by the people to expend an equal sum in making investigations designed to illustrate in a clear and practical manner the true principles of agriculture. This is what the great farming interest most needs, and what the estate of WASHINGTON on the Potomac is admirably adapted to accomplish.

"A Washington Agricultural Institute established at Mount Vernon, and properly endowed or supported by the Government, would do more for agriculture than the West Point Military Academy has done for the army and civil engineering. Hitherto there have been insuperable difficulties in the way to prevent the founding of agricultural schools and colleges in the several States which are entirely unknown to American statesmen. Two of these difficulties we will name: one is the want of thoroughly educated men to serve as professors in agricultural institutions. We have no such men in this country, because it has never possessed a single college and experimental farm for the complete professional education of teachers of rural arts and sciences. The young men educated at West Point, are duly prepared to teach military arts and sciences to all engaged in military operations, whose advantages for the acquisition of professional knowledge have been less favorable. We can never have competent teachers of agricultural sciences before we create at least one institution for their thorough education."

The plan has many features calculated to commend it to public favor. It may be set down as a settled fact that if the Government is to purchase the estate in question at all, a good round sum of money is to be annually expended upon it. To this we have no objection if that expenditure can be made to contribute in any reasonable degree to the improvement of the condition of the population of this country. There is force in the suggestions of the *American*. If it is contemplated to carry into practice on the estate any of the principles inculcated by WASHINGTON, we know of none more worthy of attention than the provision for agricultural improvement of the country. Agriculture was the great theme upon which his mind, in days and years of rest from the public service, was accustomed to dwell, and to which he contributed to a greater degree than any man of his day. It seems, therefore, fitting that in any disposition which shall be made of Mount Vernon, this leading interest of the country should have paramount attention.—*Rome Sentinel.*

The remarks credited to the *Rochester American* in favor of the establishment of a Washington Agricultural Institute on the Mount Vernon estate, are a part of an article written by the proprietor of this paper. We have reason to know that such a monument to the illustrious Farmer of Mount Vernon would be gratifying to the present owner of the property, and to Mr. GEORGE WASHINGTON PARK CUSTIS, the adopted son of General WASHINGTON, who resides at Arlington, near the federal metropolis. The country greatly needs a National Institution for the purpose of cultivating all the sciences most intimately associated with agriculture, in connection with the practice of husbandry and other rural arts. Science and practice, the study of sound principles, and the satisfactory illustration of such principles on the farm, must operate together before we can achieve the best results. In this way theories will never outrun their usefulness, for experience will at once correct their errors.

Agriculture being an experimental science, to advance it, more and better experiments are indispensable; and why should not Government aid a little in the making of these needful experiments? Farmers every where ask for more light, that they may see and understand *why* one soil is so much better than another, and thereby be able to improve all the arable lands in their possession at the least possible expense. Let them send in their petitions to Congrass to purchase Mount Vernon and erect thereon an institution that shall be to agricultural arts and sciences what West Point Academy is to military arts and sciences. Pupils at such an academy, coming from all the States, and carrying home with them a thorough practical and scientific education, would be able to found and sustain State institutions wherever needed. From the want of competent professors or teachers, such institutions have hitherto never been called into existence; and to educate teachers there should be at least one national college of the very highest order.

IRRIGATION AND TOWN SEWARAGE.—The following remarks, made at a meeting of the Royal Agricultural Society of England by one of the most enterprising farmers of the age, will be read with interest :

Mr. MECHI considered there was no practical difficulty in conveying town sewerage to agricultural districts, except that farmers and landlords must first be convinced that town sewerage is the best guano in a liquid state. He had found practically that no amount of solid manure would effect, in a given time, equal results with liquid manure, especially on pasture. He considered that, allowing six individuals as amply manuring one acre, 350,000 acres would, if necessary, absorb all the town sewerage of London with its 2,000,000 of inhabitants. Its cartage in the country costs at least 6d. per ton per mile; and as liquefied manure could be conducted at a twelfth or less of that cost, that is the most desirable condition for transmission; all solid manures might be fluidised, and sink immediately to the roots of plants, as at his farm; consequently the new fibres of growing plants, deep in the soil, receive their food in an available condition. Mr. MECHI then referred to Prof. WAY's papers on the power of soils to fix ammonia, and stated that in strong clay soils he had, while irrigating, caused the drains, at five feet depth, to discharge manure-water having both color, smell, and fertilizing properties, although he had hoped all these might have been arrested by the soil. He concluded his remarks by entering largely into the details of pipage, gutta percha tubing, and the general management of irrigation with manure. Mr. MECHI then invited the members to inspect his arrangements in their present improved state; and he should feel gratified in finding that any expenditure of his own, made by way of trial and experiment, should have eventually led to sound and practical experience, of which others might so freely avail themselves. He hoped on the 20th of next month to meet many whom he then saw present, at his "gathering" at Tiptree, where the whole of his operations would be laid open to their inspection and friendly discussion. In the course of his details, Mr. MECHI gave to the members a most graphic account of the manner in which, by means of his great tank, and the incessant action of currants of air, animal matter of every form and degree of solidity was rapidly assimilated into liquid manure, and hurried off daily with the resistless force of steam-power through his system of pipage over the land. The discussion closed with an interesting detail of facts connected with steam-power; price, number, material, and coating of pipes; fresh or ripe manure; and action of silicates on strenghtening rye-grass and other siliceous plants.

ARTESIAN WELLS.—A correspondent of the *Memphis Appeal*, who suggests the propriety of supplying that city with water by means of an Artesian well, furnishes the following interesting extracts in relation to these wells :

The origin of Artesian wells is very ancient—the first diggings of which we have any record, were made in 1126, in Artois, in France; hence their name, Artesian wells. Divers European nations, among them are England, Germany, and France, claim the priority of the invention; but both the Chinese and Egyptians were acquainted with Artesian wells.

The Artesian well is but a research made by means of the drill for a stream underground, whose reservoir will give it sufficient force to cause it to ascend to the surface of the earth. The earth's crust is composed of parallel beds, which are separated by joints well drained, and these beds have been modified by the successive deposits of water which have coursed at different epochs the surface of the continents. The earth's regularly stratified horizontal beds have received successive shocks which have dislocated and inclined them. Before determining the location of an Artesian well, it is necessary to examine the section of country, the level of its rivers and valleys, and the dip of the strata. With these given, the scientific man can determine approximately the necessary depth of the well.

The quantity of water to be obtained from a well depends entirely upon its geographical and hydrographic conditions; it may vary from ten gallons to twelve hundred gallons a minute, or 1,728,000 gallons every 24 hours.

Artesian wells not only give soft water to cities, towns, and villages, but are equally valuable to extensive farms and factories, guarding them against the long drouths which sometimes happen in the summer time; manufacturers would not suffer for want of water—in the driest summer their reservoirs could be constantly supplied; and the extensive farmer could also derive an equal benefit by judicious irrigation.

Within a few years this means of obtaining water has been extensively prosecuted in Europe, where there are now more than 3000 wells. Venice, situated on the Adriatic sea, and entirely surrounded by salt water, with a population of 125,000 souls, is supplied abundantly with Artesian wells. The well of Grenelle, Paris, furnishes water to more than 70,000 people; the water in this well flows 112 feet above the surface of the ground. The inhabitants of the town of Sheerness, England, are supplied with water from two Artesian wells. The provinces of Modena and Bologna, in Italy, for a long time have been supplied in the same manner, and so have some parts of London. The famous Artesian salt well at Kissengen, in Batavia, was commenced eighteen years ago, and which, it was feared, would have to be abandoned as a failure, has recently given the most satisfactory results. The town is located in a saline valley, 984 feet above the level of the Baltic sea.

Finally, in October, 1850, at the depth of 2067 feet, perseverance was rewarded by complete success. A violent explosion burst away the scaffolding built to facilitate the operations, and a column of water four and a half inches in diameter spouted forth to the height of 98 feet above the surface. The water—clear as crystal, is a temperature of 66 Fah., and is abundantly charged with salt. 6,600,000 pounds of salt is made per annum, and valued at 300,000 florins, after deducting all expenses."

There are a great many Artesian wells in the United States. The wells in Selma, Cahawba, and Montgomery, Ala., discharge an abundance of water, some of which discharge as much as 1300 gallons per minute, and none of them are more than 950 feet deep. The well at Columbus, Miss., is situated 100 feet above low water mark, and is 565 feet deep, and discharges about 30 gallons per minute. The temperature of the water is 65 Fah., while that the of ordinary wells in the vicinity, 30 and 40 feet deep, is 62 fah. The well in Charleston is 1060 feet deep, and the water rises 12 feet above the surface. The well at Corpus Christi, Texas, has reached a depth of 380 feet, and sends forth a handsome volume of white sulphur water. The well at St. Louis, Mo., has reached a depth of 1590 feet, and a copious stream of sulphur water flows from the well, having precisely the same taste of Blue Lick water in Kentucky. It is calculated from recent indications, that a supply of good pure water will be obtained, as the strata in which they are now boring, is of soft white sand stone.

The Artesian well in Westphalia, Germany, is 2385 feet deep, and discharges 10,000 gallons per minute; the temperature of the water is 93 fah. Boston, Mass., originally derived its supply from wells; there were 2767 wells for public use, 33 of which were Artesian wells.

There is an Artesian well in Erie, Green county, Ala., 470 feet deep, which discharges 320 gallons per minute; the water rises 50 feet above the surface of the ground.

Ohio Dressed Meats in New York in August.—We dined yesterday upon as fine a quarter of lamb as we have ever tasted, which was butchered in Columbus, Ohio, and brought here in a refrigerator can, by railroad, and we expect to dine to-morrow upon a pair of fine fowls, as sweet as though dressed to-day, which came in the same way. If any of our readers desire to satisfy themselves that our meats may be all butchered in Ohio and sent to us in perfect order, they can do so by calling upon D. Tilton, No. 8 Washington Market, who furnished us with the above specimens. We are glad to chronicle this event, though not a very new one, as large quantities of game have been sent here from the West in the same way, because it proves how easy the thing can be done, and how much better it would be to have our meats brought ready dressed from the country, thus saving the abominable nuisances of bull-fights and cow-chases in the streets, and gutters of gore among the dwellings of women and children. Success to the enterprize. If those who are engaged in the enterprize will give us the reports we will publish every arrival.—*New York Tribune, August* 31.

Cars constructed on the refrigerating principle for conveying fresh meats to distant markets from the interior, and oysters from the seaboard to refresh "the rural districts," are becoming very common. Rochester is four hundred miles from salt water, yet its market has been well supplied with fresh oysters during all the past hot summer; and we have never known fresh lake fish brought from Canada so hard, fat, and delicious, as Mr. John Milier, of this city, keeps them in ice. The most delicate fruits are preserved fresh any length of time. The principle is capable of indefinite extension, and must work a perfect revolution in the supply of many necessaries and luxuries, and greatly promote their general consumption.

On the Comparative Value of Large and Small Roots.—In consequence of the practical importance which was attached to some of the results obtained during the investigation into the composition of the sugar beet, carried on in the Museum of Irish Industry, and which were published in the form of a parliamentary report, and especially to that of the relative value of large and small roots, which was so strongly dwelt upon by Mr. Sproule, in his paper read before the Royal Agricultural Society, it was thought advisable to continue the investigation of last year. As the examination was carried on as a part of our official duties, we could not make any use of them, prior to their authorized publication, but for the kindness of the director (Sir Robert Kane), who permitted us to lay a short abstract of the principal results obtained before the society.

A great number of analyses of the usually cultivated roots have been from time to time published; but in consequence of certain necessary conditions not having been attended to, the results have been of little practical importance. Now, one of the first conditions is that of weight, which, as we shall now endeavor to show, exerts a very remarkable influence upon the composition of bulbous roots.

On the continent, where the roots are grown for the purpose of manufacturing sugar, it was long since remarked, that large-sized roots yielded less sugar than moderate-sized ones, between one and

three pounds in weight. Analytically this was fully shown by the researches of the continental chemists, who had examined the subject, and was fully confirmed by our results of last year. Further than this, no practical application seems to have been made of the fact; and as very large roots, grown in a rich and properly tilled soil, may be better than moderate-sized ones, grown in another place, no general law as to growth was surmised. In most previous investigations upon the composition of roots, the examination was confined to a single root from each locality; and hence it is owing to this cause that no satisfactory results were obtained.

To remedy this defect, we determined to take six roots from each locality—three of the largest and three of the smallest; and in order to diminish the influence of accidental causes, we subjected a great number of roots to examination. Our results are, in fact, founded upon the examination of about 450 roots, of every kind, including Swedish turnips, carrots, the different varieties of the beet, &c.

With very few exceptions, we have found that, as a general rule, small roots contain a larger per centage of solid matter than large roots, in some cases even to the extent of fifty per cent. Thus, the mean per centage of solid matter contained in three roots of sugar beet, varying from 3 lbs. 11¼ oz. to 4 lbs. 2 oz., grown by Mr. NIVEN, of Drumcondra, was found to be only 10.408, whilst in three small roots, varying from 1 lb. 3½ oz. to 1 lb. 11 ¼ oz., it was 17.427; or, in other words, 100 tons of the small roots would be equal to 167.43 tons of the large. To take another example:—Three roots of long red mangel wurzel, grown by Mr. KELLY, of Portrane, varying from 6 lbs. 14¼ oz. to 9 lbs. 3 oz., contained only 10.986 per cent. of solid, whilst three small roots, varying from 6¼ oz. to 7¾ oz., contained 15.624 per cent.—that is, 100 tons of the small contained as much solid matter as 142.18 tons of the large. The rule applies equally to Swedish turnips. Thus, three turnips, grown by Mr. BOYLE, at the work-house farm of Ballymoney, county of Antrim, varying from 6 lbs. 5¼ oz. to 6 lbs. 12 oz., yielded 13.731 per cent. of solid matter, and three small roots, varying from 1 lb. 2 oz. to 1 lb. 5¼ oz., 16.254 per cent.; or, in other words, 100 tons of the small would be equal to 118.37 tons of the large.

Owing to the influence of accidental causes—such as the comparative ripeness of the grains of seed, the influence of manure, &c.—it could not be expected that, in every case, a small difference in weight would be accompanied by a corresponding difference in the amount of solid matter; and accordingly we find that, in many cases, a root of 4 lbs may contain as much, and even more, solid matter than a root of 3 lbs. Nevertheless, such examples are rare, as will be found by reference to the tables of the detailed report about to be published. But, if we divide the roots grown upon a field into several groups, showing large differences of weight, the rule becomes universal. Thus, in seventeen roots of sugar beet, grown by Lord TALBOT DE MALAHIDE, upon the Island of Lambay, there were—

Four roots of from 6 to 8 lbs. in weight, which yielded as a mean per cent of solid matter,... 12.541
Five roots, between 3 and 5 lbs.,... 14.197
Eight roots, under 3 lbs.,... 15.756

These results clearly indicate that with increase of weight the solidity of roots diminishes.

On tabulating our results we have found that, taken as a whole, small roots, no matter how or where grown, are superior to large roots in the amount of solid matter. The following table contains a summary of our mean results, as far as we have been able as yet to reduce them:—

SIZE OF ROOTS.	White Silesian or Sugar Beet.	Long Red Mang'l Wurz'l.	Orange Globe Mangel.	Red Globe Mangel.	Swede Turnips.	Red Carrots.	White Belgian Carrots.
Average of Roots.							
Above 7 lbs.,...	10.204	10.017	10.785	8.704	10.758		
" 5 lbs.,...	11.653	11.476	11.028	10.115	11.257		
From 3 to 5 lbs.,...	15.708	14.934	13.974	12.050	12.810		
Average of all roots,...	14.532	13.635	12.645	11.188	12.031	13.370	12.990

This table presents some curious results, besides showing the decreasing value of the roots as the size increases. Thus, for instance, as far as these results go, the sugar beet contains the largest amount of solid matter of any of the root crops now cultivated; and red and white carrots, though usually sold for £2 or £2 10s. per ton, are very little superior to ordinary Swedes, and much inferior to the varieties of beet. Of course, we do not pretend that the value of roots can be determined by the per centage of solid matter alone, as its composition must be taken into account. But, in the same variety of plant, it will give an approximation to the truth—indeed, practically speaking, a very close one; in different species, or different families of plants, it is absolutely necessary to take the composition as well as the quantity of solid matter into consideration. In the case of carrots, however, an examination of the solid matter does not show that they are superior to that of the beet.

In the few exceptions to the general rule which we have observed, the large and small have had nearly the same composition, and no case has occurred where the small roots exhibited a decided

inferiority to the large. In general, we are able to account for the cause of these exceptions. In one case it arose from the seed being mixed; consequently each root examined belonged to, more or less developed, distinct varieties. As a general rule, we have found that those roots of a particular variety of the beet which had white flesh, were superior to those exhibiting a colored flesh. In one case, this was remarkably shown, as the largest root which had this character was far superior to the smallest, which was remarkable for the amount of coloring matter which it contained. Another cause of exception was, that the roots which grew out of the soil, and whose upper segment was colored more or less green, contained less solid matter than those which had grown fully under the soil. This result is in perfect accordance with the fact that the segment of the root immediately below the crown contains less solid matter than the body of the root; and hence, if a large part of the root grows out of the soil, the portion thus exposed will partake of the character of that segment.

This last observation would seem to recommend the hoeing up of the soil close to the crown—a practice which, however, appears to be opposed to that of practical farmers. It is singular that not a single exception occurred in the Swedish turnips.

These results lead to the conclusion that nearly all the analyses of roots hitherto made, especially with reference to the action of manures upon gross weight and composition, are valueless. The same remark applies to all experiments made upon the relative feeding qualities of certain crops. We make this sweeping assertion with considerable diffidence, although we feel certain that, on a little consideration, it will be found to be just. Suppose, for instance, that roots grown with one manure are to be compared with the same kind of roots grown with another manure; it is quite clear that if the roots of one set examined be larger than those of the other, the manure with which the small roots were grown will be pronounced to be the better adapted of the two for the growth of that particular root crop. Now, the size of the roots depends, among other circumstances, upon the intervals between the plants; and hence, in all such comparisons, the manure applied to land upon which the close-planting system prevails, will have the advantage over that applied to land cultivated under the other system. Need we wonder, therefore, that practical agriculture has hitherto derived so little benefit from such an analysis!

It is needless to point out the influence which the facts which we have established must have upon the system of giving prizes for large roots, on the one hand, or of growing them on the other. It is evident that the object of the farmer ought to be, to grow the largest possible amount of food from a given space of ground, quite irrespective of the size of the roots; and if science leads to the conclusion that that end will be best attained by the cultivation of moderate-sized roots, the present system, which favors the growth of large roots, must be modified. It is for the practical agriculturist to show how this is to be attained; but we are of opinion that a good many useful hints might be gleaned from the practice followed on the continent, with reference to the sugar beet. — *William K. Sullivan, Chemist to the Museum of Irish Industry; and Alphonse Gages, Assistant Chemist, in the London Farmers' Magazine.*

A Prolific Meadow.—It has become so common of late to put on record all facts tending to show the decay of the potato, I think it but fair, when anything to the contrary appears, it should be stated. Yesterday, after the refreshing showers of the morning, in company with a friend, himself a large and successful cultivator, I went to view a field of about four acres of potatoes, grown as follows: The ground on which they are growing is meadow land, with a soil of the average depth of three or four feet. The main brook of the meadow has recently been cleaned, so that the surplus water runs off, leaving it firm enough to cart upon. It is covered with a soil of richest quality, more like the prairies of the west than anything I know hereabouts.

The cultivation was commenced by spreading a coating of manure on the grassy surface, dropping the seed among the manure, cutting ditches and covering the potatoes with the material taken therefrom, leaving the ground in beds about five feet wide, and three rows of potatoes in a bed. In this way the potatoes started into growth, and now cover the ground with a most luxuriant coating of vines. A part of these, the earliest kinds, have come to maturity, and yield a fair crop of superior quality. An adjoining piece of ground was cultivated in the same way the last year, and when the crop was gathered, the vines and rubbish were thrown into the ditches, and the whole surface was leveled off, and sown with grass seed, herds grass, red top and clover, and the present season has yielded hay of good quality, to the amount of three tons to the acre, with a prospect of a second cutting of half as much more. The crop of potatoes grown the last year fully paid for all the labor applied. The first purchase of the land did not exceed twenty dollars per acre. If any one can show a grass field yielding as much, procured at an expense as moderate, I should like to see it. The proprietor has more than one hundred acres of similar meadow, that has heretofore yielded herbage of the coarsest kind; all of which he contemplates bringing into English mowing by this process. One peculiarity about this culture, *no hoeing* is needed. The few weeds that start are easily pulled up by the roots. My impression is, if the potato crop should be continued two years, the ground would be left in better condition, and be likely to remain redeemed. It will be observed that no coating of gravel or other material has been carried upon this meadow —nor does it appear to be needed. I forbear to name the proprietor, as he is abundantly capable of making his own statement, when disposed to do so.—*P., in N. E. Farmer, July* 27.

AGRICULTURAL PROGRESS IN NEW YORK.

We place on record, for future reference and comparison, the official returns of the agricultural products, value of farms, farm implements, and machinery, of the State of New York, in counties, as taken at the United States census of 1850. These figures will be found instructive to such as study them closely. In our next we shall publish a similar statement, taken from the State census of 1845, and review both at some length. If we mistake not, the progress of New York in agriculture is not so well understood as it ought to be. By a critical investigation of the records in the several counties, many important facts will be developed.

COUNTIES.	Acres of Land in Farms.		Cash value of Farms.	Value of Farming Implem'ts & Machinery.	Horses.	Asses & Mules.	Milch Cows.	Working Oxen.	Other Cattle.	Sheep.
	Improved.	Unimp'd.								
Albany,	228,505	68,877	$11,339,756	$470,878	8,587	4	12,155	2,496	7,723	37,558
Allegany,	191,969	186,320	5,540,150	361,897	7,054	33	14,926	3,099	19,682	103,219
Broome,	158,392½	131,070	5,586,307	197,036	4,232	5	12,181	3,772	11,145	30,650
Cattaraugus,	206,850	261,359	6,216,993	359,333	7,387	3	19,949	4,843	26,560	71,638
Cayuga,	298,633	99,863	15,086,322	541,770	12,508	9	18,118	3,428	19,905	122,446
Chautauque,	310,733	281,581	10,836,732	374,658	10,281	2	32,382	6,055	34,088	137,453
Chemung,	124,715½	108,557	6,352,856	251,373	4,865	4	10,016	2,278	7,552	22,597
Chenango,	332,909	169,982	9,555,847	436,606	8,757	4	30,873	5,228	22,002	88,811
Clinton,	133,573	102,504	4,256,119	198,170	5,717	4	5,846	1,475	7,594	31,725
Columbia,	297,433	62,066	15,684,468	492,516	7,001	10	13,588	3,921	10,336	103,532
Cortland,	165,447	95,812	5,405,547	351,481	5,721		20,020	2,610	14,052	38,660
Delaware,	352,941	291,963	8,583,654	439,628	8,231	7	34,493	6,351	22,611	65,196
Dutchess,	378,506	96,620½	25,181,302	658,895	8,861		18,023	6,620	18,129	96,330
Erie,	270,874	191,832	12,441,745	515,303	11,916	16	25,172	4,117	17,893	66,318
Essex,	166,951	186,610	3,393,835	182,446	4,365	10	6,747	2,085	8,808	50,206
Franklin,	103,203	64,146	2,298,912	159,578	3,650	12	6,974	1,945	8,876	27,486
Fulton,	117,413	47,122	3,465,299	199,085	3,717	4	7,416	1,124	5,803	13,484
Genesee,	208,871	69,708	10,505,382	433,480	9,685	7	8,908	2,157	10,857	116,829
Greene,	207,528	106,895½	7,943,072	344,550	5,844	5	11,919	2,993	11,026	22,280
Hamilton,	13,845	23,687	220,777	14,614	289	6	780	385	872	1,647
Herkimer,	245,648½	94,534	10,494,344	411,570	7,650		35,978	1,071	10,982	15,794
Jefferson,	418,540	179,799	13,986,823	679,298	15,406		45,186	3,486	29,370	60,330
Kings,	17,409	3,443	4,130,700	90,460	3,034	1	2,794	85	627	20
Lewis,	127,822	95,729	5,289,486	357,455	4,307	127	21,045	2,648	8,615	15,868
Livingston,	229,762½	86,938	14,018,838	360,978	9,934	2	9,033	2,526	13,297	146,846
Madison,	363,392	93,208	10,829,523	388,555	9,900	23	22,468	2,841	17,309	95,308
Monroe,	302,102½	84,394	19,617,346	782,833	13,576	4	14,201	3,230	14,933	112,297
Montgomory,	192,269½	46,868	8,680,704	367,092	7,202	1	13,766	1,399	9,303	13,379
New York,	2,428	245	4,937,000	39,181	7,773	4	2,288	38	48	11
Niagara,	178,664	102,128	6,700,836	409,995	9,510	6	8,832	2,718	11,646	59,093
Oneida,	476,069	189,572	15,930,355	527,850	14,683		47,959	4,112	24,482	70,341
Onondaga,	317,280	118,291	17,055,334	804,016	18,987	12	21,203	3,150	22,008	112,990
Ontario,	274,561½	90,996	15,066,953	566,478	10,318		11,253	3,188	13,760	149,544
Orange,	315,795	107,903	17,585,398	451,923	8,262	6	38,998	12,376	13,197	28,562
Orleans,	163,823	53,681	8,946,810	388,405	7,580	15	7,026	2,055	7,717	58,791
Oswego,	193,220½	170,060	8,087,526	423,515	8,750		21,112	3,512	16,368	35,370
Otsego,	376,868	171,294	12,560,142	597,863	12,240	10	29,958	3,431	24,959	108,244
Putnam,	85,501	35,344	4,920,700	141,774	1,598		6,990	1,920	4,131	4,503
Queens,	123,360	46,286	12,873,722	424,541	5,846	8	7,789	1,708	4,255	12,474
Rensselaer,	274,543½	75,203	13,566,490	539,570	8,504	97	16,174	3,265	9,944	85,578
Richmond,	10,311	4,863½	1,620,260	46,480	439		747	371	632	71
Rockland,	43,080	34,323	3,269,780	67,952	1,546	13	2,938	495	1,133	999
St. Lawrence,	377,086	262,627	9,242,548	657,505	13,811	139	33,365	6,555	34,441	89,910
Saratoga,	281,427	131,562	13,200,750	517,323	9,624	18	15,456	3,040	15,128	56,769
Schenectady,	76,989	28,892	3,520,430	193,943	3,225	2	5,348	801	3,859	12,295
Schoharie,	205,745	105,444	7,347,157	337,645	6,995		16,055	2,284	11,548	31,340
Seneca,	127,937	39,541	8,563,490	254,265	5,754		5,998	988	6,711	34,590
Steuben,	336,981	338,415	13,581,268	676,792	12,744	4	21,584	6,744	27,162	156,770
Suffolk,	143,612	210,292	7,195,800	211,147	5,675	214	9,292	1,770	9,944	31,440
Sullivan,	94,425	141,880	3,543,001	167,109	2,631	45	7,626	3,408	6,711	10,820
Tioga,	118,240	103,111	4,852,976	173,896	3,863		8,893	2,373	9,209	26,890
Tompkins,	223,218½	104,284	10,382,945	403,849	8,928	7	14,993	2,739	15,569	89,630
Ulster,	233,059	207,938	12,438,204	492,407	8,551	36	18,673	4,877	10,889	35,880
Warren,	95,490	126,350	1,965,312	105,282	2,724		5,202	1,682	6,554	18,400
Washington,	299,802	102,242	11,958,955	513,796	9,394		16,652	2,217	18,388	152,330
Wayne,	223,603	97,857	11,837,903	572,695	12,127	7	14,037	2,432	16,309	81,270
Westchester,	196,701	55,228	19,552,743	416,047	5,189	8	17,573	5,349	5,674	11,000
Wyoming,	228,583½	126,747	8,974,808	394,640	8,725	4	15,022	3,850	18,211	133,110
Yates,	133,971	52,529	7,578,553	196,180	5,506	10	6,482	1,258	7,370	63,290
Total,	12,408,968	6,710,120	$554,546,642	$22,084,926	447,014	963	931,324	178,909	767,406	3,453,241

COUNTIES.	Swine.	Value of Live Stock.	Wheat, bush. of.	Rye, bushels of.	Indian Corn, bushels of.	Bushels of Oats.	Pounds of Tobacco.	Pounds of Wool.	Bushels of Peas and Beans.
Albany,	25,985	$1,171,553	18,471	251,252	244,411	648,389		99,125	22,320
Allegany,	11,458	1,294,858	183,681	3,100	188,700	504,466		270,212	29,552
Broome,	8,398	852,585	60,201	39,953	159,616	409,390	20	77,296	1,810
Cattaraugus,	12,585	1,339,081	104,715	849	188,978	722,389		176,796	17,806
Cayuga,	28,769	1,861,844	468,780	29,695	704,954	735,441		367,085	5,691
Chautauque,	17,668	2,114,932	185,784	2,120	518,827	614,892		669,997	11,311
Chemung,	12,051	780,399	223,340	2,559	166,804	368,450		70,953	2,238
Chenango,	16,282	1,581,980	51,479	49,280	278,113	669,566		266,026	4,664
Clinton,	9,179	772,259	75,415½	19,351	129,782	254,654		144,190	23,487
Columbia,	38,278	1,507,279	17,589	526,450	560,079	972,015		278,772	2,287
Cortland,	10,211	1,227,235	45,662	11,110	201,988	425,180		119,060	8,518
Delaware,	17,302	1,948,026	20,295	139,505	119,334	491,571		165,291	2,946
Dutchess,	49,757	2,358,608	69,760	321,102	782,605	1,066,117	65	277,404	1,774
Erie,	20,240	1,627,240	242,221	36,879	443,160	740,270		184,489	18,537
Essex,	5,796	677,718	66,510	18,463	120,425	189,954		150,258	14,602
Franklin,	5,222	502,589	71,883	7,218	87,100	150,850	100	81,101	9,759
Fulton,	8,239	596,807	9,750	45,833	130,861	285,202		45,468	15,656
Genesee,	18,710	1,245,481	734,051	7,566	390,424	810,282		309,957	6,996
Greene,	16,515	1,000,540	10,883	122,646	189,825	354,458		49,923	2,203
Hamilton,	316	58,870	238	743	5,434	10,210		5,486	106
Herkimer,	15,073	1,387,348	48,223	28,719	209,292	591,237		44,189	23,338
Jefferson,	27,573	2,515,100	276,137	71,370	867,731	430,368		192,168	76,944
Kings,	5,366	317,672	29,926	5,662	91,949	29,588			17,065
Lewis,	9,041	972,928	73,584	9,957	83,027	188,556	958	44,137	14,817
Livingston,	18,825	1,313,792	1,111,986	7,389	366,557	323,798		410,447	6,296
Madison,	16,527	1,701,463	113,257	26,962	339,906	585,307	7,970	194,292	20,029
Monroe,	31,207	1,845,236	1,441,658	8,148	767,021	449,150		365,064	8,215
Montgomory,	13,128	1,074,258	49,421	128,684	219,648	988,097		68,025	47,087
New York,	3,802	808,857	115	75	4,698	225			78
Ningara,	20,504	1,088,804	917,738½	1,478	345,257	321,283		168,380	18,223
Oneida,	26,796	2,620,199	76,805	21,199	645,359	854,728		289,122	15,084
Onondaga,	31,018	2,086,058	427,585	45,095	782,220	891,381	78,781	345,880	24,081
Ontario,	20,147	1,529,572	929,342	7,784	520,917	421,666	100	462,95[illegible]	8,404
Orange,	42,051	1,953,092	46,527	292,296	491,074	390,834	75	47,488	842½
Orleans,	11,135	925,324	354,676	8	421,126	190,078		109,228	8,836
Oswego,	16,621	1,196,493	41,739	33,489	395,605	337,714		102,968	10,424
Otsego,	26,184	2,148,130	76,652	86,661	290,608	921,989		325,598½	22,362
Putnam,	10,304	586,623	3,869	31,070	132,376	79,535	20	18,888	585½
Queens,	18,160	851,576	124,497½	64,951	408,705	278,760		25,830	15,468
Rensselaer,	27,739	1,534,503	14,562	238,126	469,877	762,734		256,509	8,021
Richmond,	1,327	81,215	15,388	5,192	46,195	22,856			13
Rockland,	3,010	239,309	6,429	34,216	73,628	89,844		1,876	19
St. Lawrence,	18,423	2,144,176	289,956	26,764	244,690	353,993	100	287,900	56,319
Saratoga,	23,198	1,429,972	21,907	257,916	438,418	702,538		158,736	8,583
Schenectady,	5,560	470,110	12,695	76,386	116,418	331,027		31,407	6,904
Schoharie,	17,820	1,243,071	62,241	178,565	146,831	514,807	50	95,185	32,872
Seneca,	11,201	737,558	527,697	3,823	260,271	315,026		193,358	1,069
Steuben,	23,939	2,155,090	653,484	16,033	297,717	913,948		399,543	45,392
Suffolk,	14,545	894,957	128,237	49,771	317,935	248,020		77,350	8,342
Sullivan,	6,455	656,918	1,720	92,845	94,529	110,456		29,832	510½
Tioga,	8,111	644,357	121,891	10,873	145,171	286,061		60,044	2,696
Tompkins,	14,585	1,409,914	421,302	25,878	340,612	686,257		242,004	5,225
Ulster,	36,292	1,188,947	27,489	305,688	333,057	827,899		65,822	647
Warren,	5,264	418,557	7,990	22,888	95,410	76,750		52,247	940
Washington,	28,375	1,673,515	34,026	141,417	510,205	580,754		457,093	12,182
Wayne,	20,702	1,536,890	614,041	44,237	660,739	518,051		255,289	4,191
Westchester,	23,325	1,326 969	45,152	93,074	445,883	279,158		28,775	1,479
Wyoming,	15,634	1,357,322	331,639	3,700	189,192	543,977		330,472	20,477
Yates,	11,762	796,790	488,159	14,959	177,636	221,021		204,291	1,733
Total,	1,018,252	$73,570,499	13,121,498½	4,148,182	17,858,400	26,552,814	83,189	10,071,301½	741,636½

COUNTIES.	Bushels of Irish Potatoes.	Bushels of Sweet Potatoes.	Barley, bush. of.	Buckwheat, bushels of.	Val. of Orchard Prod'cts, in dollars.	Wine, gallons of.	Val. of Produce of Market Gardens.	Butter, lbs. of.	Cheese, lbs. of.	Hay, tuns of.
Albany,	406,040	2,229	80,793	212,977	$35,894	118	$59,084	970,142	58,804	71,804
Allegany,	258,870	80	29,152	39,882	44,436	1,073	11,792	1,141,102	145,391	78,212
Broome,	190,262		1,924	63,321	5,557		100	1,197,882	42,007	52,637
Cattaraugus,	350,373		12,246	23,732	23,747	6	10,996	1,792,640	1,382,963	79,526½
Cayuga,	281,692	27	303,958	46,784	60,987		4,450	1,673,315	217,413	72,590
Chatauque,	319,026	25	24,207	10,267	26,616	190	1,500	2,706,612	2,271,890	125,947

COUNTIES.	Bushels of Irish Potatoes.	Bushels of Sweet Potatoes.	Barley, bush. of.	Buckwheat, bushels of.	Val. of Orchard Prod'cts, in dollars.	Wine, gallons of.	Val. of Produce of Market Gardens.	Butter, lbs. of.	Cheese, lbs. of.	Hay, tons of.
Chemung,	108,051	16	28,602	57,222	$6,335		$2,337	829,421	84,829	40,106
Chenango,	280,817	20	28,668	48,473	19,081		195	3,069,421	1,069,331	124,453
Clinton,	352,167		6,083	48,097	6,355	94	6,781	609,047	124,450	36,583¼
Columbia,	409,472	25	14,653	148,241	15,970	411	9,177	1,571,984	132,803	74,478
Cortland,	186,629		58,002	31,961	21,168	20	503	1,989,208	1,071,690	73,871
Delaware,	373,317		3,339	147,541	24,618		1,884	3,780,585	89,988	128,964
Dutchess,	385,941	10	6,863	89,107	15,886	47	6,339	1,760,086	105,084	97,892
Erie,	375,161	83	70,820	36,885	45,234	121	18,950	1,544,201	4,293,949	90,934
Essex,	307,549		505	14,372	21,586		2,937	425,199	112,961	37,868
Franklin,	164,714	50	3,495	14,657	12,458		50	582,452	146,708	32,848
Fulton,	160,974		24,883	18,761	17,499			710,648	550,040	32,146
Genesee,	181,364		42,254	23,717	18,371	68	11,137	887,510	193,109	47,739
Greene,	219,678	30	6,589	118,490	21,159		19,150	1,236,777	40,462	72,271¼
Hamilton,	23,810		188	3,884	889		5	66,930	2,928	4,004
Herkimer,	273,227		68,894	35,895	47,025		25	1,397,921	9,548,099	95,520
Jefferson,	77,417		227,416	15,182	43,227	54	2,056	3,584,376	4,192,719	131,949
Kings,	208,452		230	1,966	1,798		88,080	635		6,804
Lewis,	287,707	10	23,818	10,117	13,116	75		1,655,245	3,067,300	67,280
Livingston,	181,474		122,271	21,846	19,989	857	880	834,198	162,444	44,274
Madison,	268,788		295,067	18,583	37,792		1,157	1,584,499	2,450,172	98,565
Monroe,	561,425	320	106,049	26,306	67,192	667	85,262	1,258,735	286,658	62,602¼
Montgomery,	189,825		125,204	128,127	30,087	228	1,461	1,005,635	1,668,709	50,068
New York,	13,321				4,435		121,585	3,195		948
Niagara,	162,082		76,510	20,069	32,349	15	4,736	793,206	69,270	35,724
Oneida,	539,985	270	141,939	53,452	88,822	921	11,092	3,963,392	5,218,784	167,047
Onondaga,	487,566		440,293	33,673	66,685	182	15,577	2,147,518	1,004,878	82,004
Ontario,	231,684		170,300	21,513	49,382	105	7,978	1,047,782	255,284	62,478
Orange,	146,331	10	1,495	90,749	15,291	908	5,797	3,769,034	620	96,598
Orleans,	141,157		28,958	20,101	38,531	14	661	704,881	105,578	26,875
Oswego,	320,166	19	16,769	37,620	70,605	15	2,669	2,031,574	1,340,545	60,980
Otsego,	500,372	30	80,574	105,353	44,257	1	220	2,497,871	2,049,673	113,209
Putnam,	99 821			34,063	14,934	83	274	785,330	7,863	25,040
Queens,	307,551	10	3,340	58,605	63,475	186	309,957	561,230	2,697	48,027½
Rensselaer,	602,595		14,055	98,814	56,759	228	11,928	1,336,281	688,856	84,642
Richmond,	28,871	1,411	1,180	2,052	2,880	75	14,412	34,792		5,642
Rockland,	46,570			31,842	5,241	78	6,669	219,283		11,712
St. Lawrence,	476,934		16,520	19,227	29,955	10	4,468	28,769,181	596,450	122,688
Saratoga,	596,494	120	26,626	109,900	33,439	129	5,512	1,388,594	258,588	67,588
Schenectady,	189,285		60,181	66,618	14,563	25	3,709	505,970	97,720	24,269
Schoharie,	215,308		110,548	161,027	32,827	271	486	1,603,063	99,375	52,759
Seneca,	79,847		81,708	18,976	26,990		222	513,694	19,765	29,763
Steuben,	360,725	245	153,056	115,390	30,565	285	3,740	1,918,465	210,889	111,869
Suffolk,	178,549	406	15,014	87,359	11,235	112	2,608	459,293	3,730	33,080
Sullivan,	122,930		102	87,754	8,557	6		732,691	4,585	22,001
Tioga,	137,344		6,053	45,414	4,996		32	896,140	67,977	39,524
Tompkins,	183,248		81,689	109,785	23,930	100	455	1,635,789	71,389	67,981
Ulster,	234,324	60	394	150,418	28,875	5	472	1,211,650	1,400	67,407
Warren,	150,176			16,993	8,712	300	400	464,175	86,498	22,353
Washington,	526,268	35	14,819	40,401	65,159	97	3,705	1,451,516	741,027	89,752
Wayne,	278,217	39	107,453	27,436	83,451	480	5,092	1,367,867	173,930	54,084
Westchester,	439,941	18	2,796	37,616	67,587	259	43,986	1,547,504	1,070	79,646
Wyoming,	226,399	6	48,186	27,878	21,875	339	458	1,200,297	1,007,859	75,067
Yates,	91,524	20	174,768	22,944	21,531	85	25	537,634	98,866	34,678
Total,	15,208,362	5,623	3,585,059	3,183,555	$1,761,950	9,172	$912,047	79,766,094	49,741,413	3,728,797

COUNTIES.	Clover Seed, bushels of.	Other Grass Seeds, bush. of.	Hops, pounds of.	Hemp, water-rot'd, tons of.	Hemp, dew-rotted, tons of.	Flax, pounds of.	Flax Seed, bushels of.	Silk Cocoons, pounds of.	Maple Sugar, pounds of.	Molasses, gallons of.	Beeswax & Honey, lbs. of.	Value of Home-made Manufactures.	Value of Animals slaughtered.
Albany,	603	1,458	123			7,203	758	54	13,032	490	35,851	$22,112	$239,076
Allegany,	281	3,019	218			7,861	883		585,550	3,458	41,048	64,924	154,118
Broome,	52	386½	88,787			3,109	103		113,026	330	14,756	17,947	128,146
Cattaraugus,	55	2,876	40			9,639	435		788,681	991	50,332	48,455	158,080
Cayuga,	2,545	1,676	1,442			10,761	1,324		109,048	410	34,678	23,117	350,676
Chautauque,	114	1,889	5,735			15,177	1,333	511	787,508	581	36,170	45,962	275,298
Chemung,	348	981	50			1,042	20½		34,123	682	31,746	11,120	126,258

COUNTIES.	Clover Seed, bushels of.	Other Grass Seeds, bush. of.	Hops, pounds of.	Hemp, water-rotd, tuns of.	Hemp, dew-rotted, tuns of.	Flax, pounds of.	Flax Seed, bushels of.	Silk Cocoons, pounds of.	Maple Sugar, pounds of.	Molasses, gallons of.	Beeswax & Honey, lbs. of.	Value of Home-made Manufactures.	Value of Animals slaughtered.
Chenango,	192	1,390	26,674			12,606	461	200	547,882	1,106	29,666	$30,798	$210,117
Clinton,	20	621	703			615	18		147,643	880	28,458	36,978	127,902
Columbia,	6	322	425			2,950	169	12	840	32	39,420	17,054	235,496
Cortland,	866	1,585	10,827			42,918	1,978	22	521,058	2,946	24,360	21,178	150,562
Delaware,	33,844	2,300	5,538	1		1,508	195		469,517	668	82,469	46,671	199,248
Dutchess,	50	1,200½	289			7,182	842	5	1,799	20	45,572	8,188	482,029
Erie,	2,250	3,206	894			6,558	259½		307,001	1,697	35,586	44,776	276,063
Essex,	100	197				285	2		60,554	6	20,689	5,496	106,422
Franklin,	55	960	50,436			1,291	87	3	252,279	1,505	7,993	18,781	81,722
Fulton,	112	444				10,621	687½		43,240	1,195	20,247	6,811	99,560
Genesee,	718	1,862	1,091		1	1,558	299		192,899	2,801	24,089	17,749	196,860
Greene,	2	342	13			634	55		68,946	1,929	70,331	8,525	172,183
Hamilton,		68				40	2		14,683		2,876	6,969	7,890
Herkimer,	1,735	1,504	163,408			62,246	2,780		105,361	3,440	36,566	16,417	165,596
Jefferson,	31	6,127				2,954	643½		318,394	1,705	26,186	80,110	823,360
Kings,	655												81,212
Lewis,	19	2,420	11,322			31,905	1,171		436,378	1,393	17,968	15,971	100,768
Livingston,	2,088	1,174	7,018			1,786	225	8	47,556	455	26,956	14,158	191,201
Madison,	164	1,906	529,070			4,421	544	87	125,480	1,822	27,846	25,018	223,187
Monroe,	3,099	1,687	58,029			1,457	76	5	87,463	592	17,335	15,764	847,235
Montgomery,	1,905	2,680	34,955			20,034	4,030		45,196	1,095	33,660	17,841	150,374
New York,											250		1,618,758
Niagara,	3,563	1,516	20			435	317	1	13,258	145	18,085	25,234	180,145
Oneida,	166	9,924	294,944			1,684	24		177,351	2,792	31,586	37,696	498,390
Onondaga,	2,442	1,198	5,329			20,064	1,703	60	128,785	582	39,766	24,430	474,235
Ontario,	3,161	1,247	16,171			595	266		128,559	925	30,330	18,018	384,664
Orange,	118	1,027	36		2	996	39		1,681		35,232	8,901	372,042
Orleans,	1,476	1,165				451	153	50	34,466	1,140	12,745	13,264	140,889
Oswego,	158	1,106	8,761			5,960	324	60	197,825	1,774	35,629	50,182	238,476
Otsego,	2,846	4,431	1,132,052			22,066	1,457½	5	384,996	2,990	45,472	32,271	260,181
Putnam,		672	19			100	6		1,925		10,975	2,064	118,684
Queens,	111½	656	20							225	5,299	767	319,441
Rensselaer,	3	660				268,091	11,621		30,180	63	42,702	9,458	308,863
Richmond,										48,200			14,599
Rockland,	3	12	50				10				5,025	201	54,636
St. Lawrence,	70	2,736	101,555			3,045	149		1,236,504	89	28,018	82,912	284,571
Saratoga,	587	949	4,824			6,621	489		16,895	826	68,241	20,721	320,118
Schenectady,	106	636	25			82,190	1,454				11,294	1,971	78,484
Schoharie,	5,077	4,563	10,567			10,497	2,601	6	111,344	2,065	31,181	26,098	187,472
Seneca,	7,052	2,987	19			867	1,561		11,999	985	18,547	8,904	17,042
Steuben,	1,386	4,479	424			16,241	1,270	2	294,897	8,547	94,991	76,287	296,798
Suffolk,	41	1,257½	109			496	20	107			3,454	5,677	282,297
Sullivan,	13	1,224½	72			600	19		11,276	21	28,061	10,546	103,660
Tioga,	259	362				2,008	103		43,213	1,166	16,235	13,158	91,032
Tompkins,	2,202	1,859	18			16,578	2,355		102,099	1,298	78,063	20,942	193,315
Ulster,	248½	1,115½	177			14,724	1,765		51,899	1,468	55,846	21,689	824,286
Warren,	42	34	5			414	22		34,258	24	19,230	10,330	70,909
Washington,	14	950	410			280,608	9,247	55	13,781	145	52,231	9,878	314,981
Wayne,	2,791	1,443	1,033			2,665	467	194	45,947	322	29,948	31,287	263,728
Westchester,	397	446	169						50		6,528	8,555	311,482
Wyoming,	410	3,745	11,879			12,417	1,965	26	572,598	989	37,571	29,029	155,091
Yates,	1,648	866	1,650			1,098	982	306	38,637	450	24,526	6,283	100,292
Total,	38,223	96,498	2,586,299	1	3	940,577	57,963	1,774	10,357,484	56,529	1,756,190	$1,280,333	$18,573,968

WHEAT, RICE, AND PEA WEEVILS.

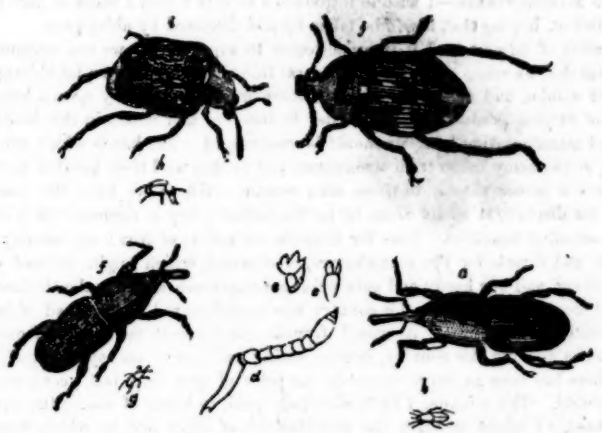
This family of insects belongs to the beetle tribe—order *Coleoptera*. Speaking of this family of destructive insects, Dr. Harris says: "The name weevil is given in this country to at least six different kinds of insects, two of which are moths, two are flies, and two are beetles. Moreover, since nearly four thousand species of weevils have actually been scientifically named and described, when mention is made of 'the weevil' it may well be a subject of doubt to which of these four thousand species the writer or speaker intends to refer; whereas, if the scientific name of the species in question

were made known, this doubt would at once be removed. To give each of these weevils a short, appropriate, significant, and purely English name, would be very difficult, if not impossible, and there would be great danger of over-burdening the memory with such a number of names; but by means of the ingenious and simple method of nomenclature invented by LINNÆUS, these weevils are all arranged under three hundred and fifty-five generical or surnames, requiring the addition of a small number of different words, like christian names, to indicate the various species or kinds. There is often times great convenience in the use of single collective terms for groups of animals and plants, whereby the necessity of enumerating all the individual contents or characteristics of these groups is avoided. Thus the single word *Ruminantia* stands for camels, lamas, giraffes, deer, antelopes, goats, sheep, and kine, or for all the hoofed quadrupeds which ruinate or chew the cud, and have no front teeth in the upper jaw."

These remarks of Dr. H. illustrate an important principle in the study of Natural History, and are equally applicable to its every department. Weevils differ from most other coleopterous insects, and especially from ground-beetles, cockchafers, or May-beetles, flower-beetles, stag-beetles, saw-horned borers, spring-beetles, and timber beetles, in the anatomy of their feet. These beetles all have five joints in their feet, whereas weevils have but four. Weevils in the winged state are hard-shelled beetles, and are distinguished from other insects by having the fore part of the head prolonged into a broad muzzle, or a large and more slender snout, in the end of which is the mouth, which is armed with horny jaws.

The generic name of weevil is *Rhynchophoridæ*—literally, snout-bearers. They are usually of small size, with their antennæ knobbed at the end. The antennæ spring not from the head, but from the snout or muzzle, which is generally grooved to receive the base of these appendages. Their feelers or palpi are very small, and in most kinds are concealed within the mouth. The abdomen is often of an oval form, and wider than the thorax. The legs are short, not fitted for running or digging, and the soles of the feet are short and flattened. They like the sunshine, and are abroad in the day time. Some fly well, but others are wingless, or nearly so, and unable to fly. They walk slowly, and when alarmed turn back their antennæ under the snout, fold up their legs, and fall from the plants on which they live. They use their snouts not only in feeding, but to bore holes in which to deposit their eggs.

The young of these snout-beetles are mostly short, fleshy grubs, of a whitish color, and without legs. The covering of their heads is a hard shell, and the rings on their bodies are very convex or hunched, by both of which characters they are easily distinguished from the maggots of flies. Their jaws are strong and horny, and with them they gnaw the plants and seeds on which they subsist. It is in the grub state that weevils are most injurious to vegetation. Some of them bore into and spoil fruits, grain, and other seeds; some attack the leaves and stems of plants, causing them to swell and become cankered, while others penetrate the solid wood, arrest the course of sap, and cause the branch above the seat of attack to wither and die. Most of grubs are transformed within the vegetable substances upon which they have lived; some, however, when fully grown, go into the ground, where they are changed to pupæ, and afterwards become beetles or weevils. The weevils best known to farmers, because most injurious, are the wheat-weevils, rice-weevils, pea-weevils, plum-weevils, blight-weevils, and pine or bark-weevils. The true grain or wheat-weevil, *Calandra granaria*, or *Curculio granarius* of LINNÆUS, in its perfect state is a slender beetle of a pitchy red color, about one-eighth of an inch long, with a slender snout slightly bent downward, a coarsely punctured and very long thorax, constituting almost one-half the length of the whole body, and wing-covers that are furrowed, and do not entirely cover the tip of the abdomen. This little insect, both in the beetle and grub state, devours stored wheat and other grains, and at the south is often very destructive, but less so in the middle States, and is



DESCRIPTION OF PLATE.—*a*, *Calandra granaria*, granary weevil, magnified. *b*, The same, natural size. *c*, One of the mandibles, or jaws. *d*, The antennæ, or horn. *e*, The maxilla. *f*, *Calandra oryzæ*, rice weevil, magnified. *g*, The same, natural size. *h*, *Bruchus granarius*, (another species of grain weevil,) walking in outline, natural size. *i*, The same magnified. *j*, *Bruchus pisi*, common pea weevil, magnified.

rarely seen in the northern. Its powers of increase are very great, for it is stated that a single pair may produce above six thousand descendants in one year. From the laying of the eggs to the development of the perfect insect in warm weather, only some three or four weeks intervene. The female deposits her eggs on the wheat after it is housed, and the young grubs hatched therefrom immediately burrow in the wheat, each grub occupying alone a grain, the substance of which it eats, and frequently so as to leave nothing but the hull. At the south it is the practice to sun wheat to destroy the weevil, and large bins are made for the purpose. In Europe grain is kiln-dried for the same purpose. A heat of 130° destroys the insect; and the same is true of pea-weevils.

Rice is attacked by a weevil closely resembling the wheat-weevil; it is called *Calandra oryzæ*. It is distinguished from the wheat-weevil by having two large red spots on each wing-cover; it is also somewhat smaller, measuring only about one-tenth of an inch, exclusive of its snout. This insect feeds on maize and wheat as well as on rice. It is called *the black weevil* to distinguish it from the wheat insect.

The pea-weevil (*Bruchus pisi*) abounds in nearly all the States; but from some cause, perhaps coldness of the climate, it does not seem to flourish in Canada. Hence many farmers in New York, Western Pennsylvania, and Ohio, obtain their seed-peas from the Provinces, which are entirely free from the insect. All leguminous or pod-plants are attacked by this *Bruchus* family, such as beans, *Gleditsia*, *Robinia*, *Mimosa*, *Cassia*, &c. The female wounds, by an incision, the skin of the young and tender pods of plants, and lays an egg singly in each wound.

Perfect weevils come out in the spring, earlier or later, according to the climate, but always in season to propagate a new generation when peas are in blossom and forming their pods. The safest way to escape the ravages of this depredator is to keep seed-peas over one summer. If all the farmers of a county or State would do this regularly, the insect would soon cease to annoy them.

Putting camphor in tight boxes or casks, in which peas are stored that contain the young of the insect, will kill them by its offensive pungency. This is an excellent remedy for other insects, such as moths, which attack clothes in chests and drawers.

Farmers and Manufacturers.—I wish to introduce a subject which I think of vast importance to the farming interest, hoping that it will be taken up and discussed by abler pens.

We are a nation of farmers, and it is preposterous to suppose that we can consume every thing within ourselves that we raise. Europe, as a general thing, supplies its own inhabitants with breadstuffs and other edibles, and clothing. We must therefore depend mainly upon a home market for the sale of our surplus products; and in order to increase and maintain this home market, the mechanical and manufacturing interests should be encouraged. The hands which are employed in these pursuits, are so many taken from agriculture, and as they and their families must be fed and clothed, it gives a better chance to those who remain. Where we have the raw materials in abundance at our disposal, it would seem to be the better policy to manufacture it ourselves than to import it from other countries. Take for instance the article of iron: our country abounds with ore, fossil, coal, and forests for the manufacture of charcoal, which might be used extensively in fusing and smelting, and our hardy and enterprising countrymen would make the best of bloomers, &c. If all the iron that is used in this country was manufactured here instead of importing such immense quantities from abroad, it would furnish employment for many of our citizens and foreigners who are flooding this country, besides saving millions of money at home for circulation among us. There has been an improvement in the price of iron since last year; nails have risen one cent per pound. This advance I have cheerfully paid, in hopes of seeing this branch of home industry sustained. I might mention the manufacture of other articles which would be advantagious to the country, but I do not wish to tax your columns too heavily at this time.

There is, however, one branch of manufactures carried to considerable extent which might well be dispensed with—that is, the manufacture of whisky*—an article which is worse than useless, except for medical and mechanical purposes. But it is not my purpose at this time to make out a temperance lecture. My object is to show its bearing upon the farming interest. In this I am aware that I shall come in collision with the opinion of many eminent men; but let us impartially examine the subject for a few moments, that the public may be able to judge whether I am right or wrong. Here is an indispensable article of food for both man and beast, which an Allwise Providence has mercifully bestowed upon us for our comfort and support, converted into an article of which, to say the least, is useless. The strongest argument made use of by the advocates of distilling is, that it creates a market for our coarse grain; and the question is often asked, What should we do with that article, were it not for the stills? I would answer, feed it to your young stock, and fatten your pork, beef, and mutton. In this way your grain is worth at least twenty-five per cent more than to sell it at the ordinary prices, as all the manure will be left on the farm. Some farmers are so penurious that they will scrimp and pinch their stock for the purpose of having something to sell. The result is, their *crow rates* amount to more than they get for their grain or hay—that is, many of their animals die by actual starvation and neglect; and what do survive become so poor that it takes them half the summer to recover what they lose by bad wintering. Thus their fields are disgraced by a diminutive race of animals, besides being a serious drawback on the profits of the farm.

Young animals should be kept growing until they reach maturity. If they are suffered to get poor and stop growing they will retrograde, and never attain a full size; and without grain, or something better than hay, it is next to impossible to keep them in that condition, especially the first winter. It is a well-known fact that still-slop pork is soft and oily, and does not possess the intrinsic value of that which is fattened by the farmer on more substantial feed. The former governs the market, and what little is made by the farmer has to come in competition with it, and come down to the same level.

The last, but not the least objection, is the great waste of manure. Our agricultural journals very justly urge upon us the necessity of more economy in making and applying manure. They tell us, to a mathematical demonstration, the exact number of pounds and ounces of grain-forming elements which are extracted from the soil in the production of a given quantity of wheat, which is carried off to our seaboard cities and elsewhere, never to return. I do not know but this is all correct, as I am not a chemist; but there is one thing I do know, and that is, there are thousands of tons of the best kind of manure annually washed down our mill streams from the different dis-

* I was once a member of a grand jury who found a bill of indictment against an ex-member of the Assembly, for keeping a public nuisance (a still and hog pen) in the upper part of a village, whose filth floated down through said village. This was as it should be. Every still should be considered a public nuisance, and if they were all struck out of existence the country would be better off.

tilleries in this State, poisoning and polluting the waters below, and are a dead loss to the country.* Of this no mention has ever been made, to my knowledge, in any of our agricultural papers. "J. H.," in his several articles under the head of "The Farm as a Manufactory," does not even glance at the subject. The farm should be a manufactory of pork, beef, mutton, butter, cheese, &c., and then the manufacture of manure would follow, as a matter of course. JASON SMITH.—*Tyre, N. Y.*

In ordering your paper, I might add something in respect to climate, soil, productions, &c., but suppose it would be superfluous, as I see you already have correspondents in this far-off region. At some future time you may receive a short account of the crops and weather; but whatever I may write will be plain matter of *fact*, that comes under my own observation.

In describing the state of things in Oregon, all the drawbacks should be stated, as well as what a crop can be sold for. I will mention what I conceive to be a few facts. The *seasons* are very variable—the *weather* not very. To *commence* farming (successfully) requires as much capital as to buy an ordinary farm (improved) in the States. For instance: a good horse or ox team would cost from $500 to $800; good breaking plow, $60; common two-horse plow, $30; and so of other implements in proportion.

Much suffering existed among the last year's large emigration; and a very large proportion of their cattle died during the snow, which was eighteen inches deep, and remained on the ground three weeks. Markets are very fluctuating, last winter flour was $21 per cwt.—*now* it is $8 and $9. Wheat is the best crop raised, producing on best land about twenty bushels per acre. Potatoes, on common dry land, unless well manured, can not be raised to pay; on moist, rich land, with good cultivation, they do well. The common blues yield best. The northern fruits do well as far as tried, excepting peaches. This latter is badly affected by the curl in the leaf. The few bearing Apple trees in the country promise an abundant crop. Oregon can never support as dense a population as the States. Corn can not be raised to pay. Fruit trees follow the example of the Fir timber in their luxuriant growth—growing faster, and bearing sooner, than in most of the States. Fowls, at $1 each, will not pay to raise at the present prices of grain. W. B. DAYTON.—*Oregon City.*

We thank Mr. DAYTON for his letter; and while we have other valued correspondents in Oregon, we shall be at all times happy to hear from him on subjects suitable for our paper.

HAPPENING to take up a June number of the *Genesee Farmer*, I was so well pleased with the independent and healthful remarks, editorial, in regard to the management of pastures, and also the management of "two-penny lawyers," who have inflicted such vast injury by being legislators, par excellence, upon all subjects, that I wish to take your paper, although I now take several other agricultural works. When will the farmers of the United States awaken to the true dignity of their station; the importance of their calling? When will they assert the supremacy of their strength, and direct it to the supplying of their wants by legislation, as well as in agriculture? Throw off the yoke which binds you to believe, or rather to acquiesce, in the idea that a "two-penny lawyer" is the only man capable of delivering your annual addresses before State Agricultural Societies, over the United States. Are you always to be dependent upon the dealer in quirks, quidities, and certioraris, for your annual addresses? As well hire some celebrated hatter, or shoemaker, to enlighten you in your profession. It is a virtual confession that you are sadly ignorant of either your profession or your dignity of station, to permit such a course any longer. Let 1853 mark a new era, and let no clap-trap lawyer, or other *professional gentleman*, be forced upon you, with his address drawn up with "soft-solder," for political popularity and hope of office. Rise! control your own business, appoint practical farmers to deliver your annual addresses, and to fill your halls of legislation. If they are incapable, the sooner it is made to appear the better. From all the taxes you pay, how much is appropriated to the study of the qualities of the soil, from which these taxes are drawn? Sleepers, awake! the Philistines are upon you. GEO. W. TIFFANY.—*Milwaukee, Wis.*

FOR CURING WOUNDS IN SHEEP.—Take the leaves of the Elder tree, and make a strong decoction, and wash the parts injured from one to three times a day, and you will not be troubled with flies or worms on the wound. It also removes fever from the wound, and is healing. ALEX. TITUS.—*Yorktown.*

Horticultural Department.

CONDUCTED BY P. BARRY.

HARDINESS OF TREES.

HARDINESS in trees is a quality universally sought for; whatever other excellence they possess, this seems indispensable. But this quality of hardiness is almost exclusively looked for as a *natural* characteristic of particular varieties, and not as the result of certain influences exerted by soil, climate, and modes of culture. Planters will write to their nurseryman to send them "nothing but hardy varieties," but they seldom go so far as to say, send me hardy *trees*—such as have robust constitutions, capable of enduring the fatigues of removal, transportation, change of soil and climate, as well as all the other trying circumstances which transplanted trees are heir to. Our purpose at present is, to call the attention of tree-planters and nurserymen to this very important matter.

What is it, in the first place, that makes a tree hardy? Our experience tells us it is firm, well ripened wood, with abundance of healthy roots. These are the two main points of excellence in a young tree, to which, of course, we would add a good shape and reasonable size for its age. Now, how are we to get firm, well ripened wood? Is it by growing trees as we would mushrooms? Certainly not. By applying large quantities of stimulating manure we may grow young trees into wonderful dimensions, and very beautiful to the eye; but will men who buy trees for their own planting look no further than this? Very few do, we know. As a general thing, the larger a tree is for its age, the better it pleases the purchaser—no matter how it has been grown; and this is leading us rapidly into a most pernicious system of nursery-culture. When nurserymen find that by forcing their trees into a rank growth they can secure a readier sale and higher prices, they certainly will do it, and the planter may take the trees on his own risk. This is all wrong; and until planters cease to regard size as the prime requisite, we need not expect to get rid of the common complaint that "so many of my trees have died."

The nursery is the place to give trees a sound, robust constitution: this is certain; and we beg every man who values hardiness in trees to note it well. It does not require a knowledge of vegetable physiology, but the exercise of plain common sense to understand this. In rearing animals for actual and profitable service, we do not nurse and feed them as though they were merely intended to take the prize at an exhibition. We rather feed them moderately, and give them such exercise and training as are calculated to produce a vigorous muscular developement. So with trees. They should not be grown merely to please the eye—the planter should look to the future; and all planters of experience do. We are by no means in favor of starving trees; we regard a stunted tree as worthless. What we want is a moderate, natural growth, such as will mature fully and perfectly before the close of the growing season. This is always indicated by healthy foliage, short-jointed wood, and plump, well formed buds. The bark, too, as the growth proceeds, assumes a tint of maturity. The rank, forced trees, are readily distinguished by their young shoots being almost transparent; the buds flat and small, and far apart; the leaves thin and delicate in their texture, and the bark soft and succulent as that of the tender annual plant. In comparing cross sections of the wood as seen through a magnifier, the moderately grown tree will exhibit a compact mass of woody fiber, while the forced, over-luxuriant tree will present a mass of shaggy, cellular tissue, with scarcely enough woody fiber among it to keep it erect, and the pith in the

latter will be three times as large in proportion as the former. When the spongy trees are removed from the sheltered position they occupy in the nursery rows, they are unable to resist the action of the elements. The roots are like the stem and branches—soft and spongy, with large, resistless sap-vessels that shrink and shrivel and perish under circumstances that would not affect the firm, compact, and well ripened tree.

Planters owe it to themselves to encourage a sound, honest system of cultivation by giving preference to hardy, well-grown trees, instead of *large* ones, and thus offering a premium to a spurious hot-bed system, ruinous to the planting interest. Trees for successful planting should be grown on a dry soil of moderate fertility—not too closely together, well exposed to the sun and air in all stages of their growth, and the soil should be kept clean and pliable about the roots to admit of their vigorous and healthy growth, and of their easy and safe removal.

October is one of the most active months in the year with the gardener, orchardist, and nurseryman. A multitude of labors demand simultaneous attention, and it requires the most untiring energy and industry on the part of every one who has any considerable charge on his hands to see that every thing be done at the proper time and in the proper manner. Fortunately, in this country, our October weather is delightful—dry, cool, and bright, generally, and therefore eminently favorable for the rapid and proper execution of all out-door work.

Transplanting of all hardy trees, shrubs, and plants usually begins here in the north about the first of October; and, as we go further south, it must be deferred later. We are greatly in favor of early planting, when it is practicable; it is by no means necessary to wait until the leaves have fallen. If growth has fairly ceased, and the wood has become firm, trees may be removed; the leaves must be taken off to prevent shriveling, and the roots must be carefully guarded against exposure until they be again placed in the ground. Autumn planted trees should by all means be secured against the winds, either by staking or banking up; and they should be well mulched besides. From this time until the final freezing up of the ground, the laying out and improvement of new places should be carried forward vigorously, as the weather and the condition of the ground are both more favorable than during summer or spring.

Neglected orchards should now be renovated by manuring and plowing, or spading about the roots. This should never be deferred till spring, because during the winter and spring the sod decays, and the manure dissolves, and abundant food is thus prepared for the trees next season.

The *gathering and storing of fruit* must be carefully attended to by all who place a proper estimate on the products of their orchards and fruit gardens. We have given elsewhere an article that furnishes many useful hints on this subject; it is worthy of an attentive perusal.

Kitchen and garden crops for winter and spring use require nice management to keep them in a proper condition. Such as are taken up and placed in the root-cellar should be handled when dry, and the cellar should be clean and sweet, and perfectly free from moisture both above and below; it should also be kept cool as possible, but not admit frost.

Such of the bedding-plants as Salvias, Scarlet Geraniums, Fuchsias, Heliotropes, Cupheas, Bouvardias, Plumbagos, Abutilons, &c., as it is desired to save for another season, should be carefully lifted early, and either potted or planted closely in boxes, and placed in a cool green-house, or in some place where they will have light and not freeze. A corner of a dry cellar beside a window will answer in case of necessity, but decaying leaves must be frequently removed. Many of these plants, and some others we have not mentioned, such the *Habrothamas*, if taken up carefully in good season, may add materially to the beauty of the green-house through November. Many of the late flowering annuals are useful, too, in this way. *Chrysanthemums* from now till Christmas will be among the chief ornaments

of the green-house; they require plenty of light—all that can be given them; plenty of water, and an occasional dose of liquid manure.

A great error in the management of most green-houses is, crowding the plants too closely, so that they grow up tall and lean, losing all their lower branches and leaves. Far better to throw away all surplus stock, and give ample room to what is reserved. One good healthy, well-grown plant is really worth *twenty* poor ones that every one feels ashamed of. All houses, and frames, and pits should be well ventilated in fair weather, and decaying wood or leaves removed promptly. Hardy *bulbous roots* should be planted immediately; yet it can be done any time before the ground freezes. There are certain things that vegetate early in spring, and should therefore always, if possible, be planted in the fall—such as gooseberries, currants, rhubarb, and all hardy spring-flowering shrubs, and hardy herbaceous plants. A good bloom next spring may be secured by planting now, but will be lost if the planting be deferred till spring.

THE FRUIT CROP IN WESTERN NEW YORK.—Apples, generally, are neither so abundant nor so fine as usual; a single orchard, or a few trees, here and there, are exceptions. The crop of pears is much below that of last year. Peaches have surprised people by their abundance and fine quality. We have been through New Jersey, Delaware, Maryland, &c., in the midst of the peach season, and saw no finer fruit than has been sold here in large quantities since the 10th of September. The worst feature in our peach business is, that it opens late. *Early York* did not appear in market till the first week in September, and now (Sept. 18) *Crawford's Early*, *Large Early York*, and others of the same season, are coming in freely. *Morris' Whites* and *Old Mixons* will not be ripe for a week or ten days, and *Crawford's Late Melocoton* and *Red Cheek Melocoton*, will not be ripe short of two weeks. It is interesting to observe that some orchards in which there was a full crop last year, are entirely fruitless this, and others that bore none last, are laden this season. Within a few miles we see some orchards bearing well, and others a total failure. Our heaviest crops are in warm, sheltered situations, within a short distance of the shores of Lake Ontario.

A HANDSOME PEACH ORCHARD.—JAMES M. WHITNEY, Esq., of Rochester, has a peach orchard of upward of one thousand trees about half way between this city and Lake Ontario, which we visited on the 13th September. The trees generally are in a vigorous and healthy condition, and the crop very heavy. This orchard occupies a warm, sheltered situation, and seems to have escaped the severe weather last spring, so ruinous to the peach generally in this section. Among those particularly fine we noted *Large Early York Crawford's Early Melocoton*, *Yellow Alberge*, *Jacques' Rare Ripe*, *Morris' White*, *Old Mixon Free*, and *Crawford's Late Melocoton*. *Early Tillotson* is an utter failure—thirty or forty trees stand without a single fruit and *nearly dead*, in the midst of luxuriant and heavily laden trees of other varieties. The *Red Cheek Melocoton* does not succeed well here. Mr. WHITNEY has also a fine young peach orchard of some seven hundred trees just beginning to bear.

TRANSPORTATION OF TREES.—The transportation of trees from one place to another has now grown into importance, and the rush of other freight on the railroads in the autumn and spring renders it almost impossible to have them forwarded without serious delay. There is a universal complaint about this matter, and we would once more suggest the propriety of founding a *nurserymen's express*, or making an arrangement with the existing companies to send special messengers with trees along all the leading thoroughfares, leaving the principal points where this trade is extensively carried on two or three times a week. We think that railroad companies should issue orders to their agents at all the stations to give preference to trees in all cases where there was more freight than could be sent at once. If this were done, there would be no difficulty; but as it is now, trees fare worse than any other goods whatever.

CURLED LEAF IN THE PEACH.—Your August number has been placed in my hands by my neighbor, Mr. MERRIAM, who is an intelligent horticulturist, and we have compared notes on the subject of "curled leaf in the peach." We agree with you in your belief that this disease arises, mainly, "in sudden changes, from genial spring weather to cold and rainy, with slight frosts, which arrests the developement of the young shoots and leaves, by which the sap becomes stagnant and diseased." You ask, "Has any one seen it in warm weather—say in June or July?" In reply I would state, that the last month—about the middle, I believe—we had a cold north-west wind, and just escaped a frost; the result on an *Early York* of Mr. MERRIAM's was, that the leaves curled up, and generally all dropped, so as to almost cover the ground. This led Mr. MERRIAM to observe that several of his other innoculated Peach trees were affected. My experience for eight years with the peach in this latitude, 43 deg. 30 min., and within four miles of lake Ontario, is, that we do not succeed oftener than one year in three with this fruit in the grafted varieties, while the natural is hardy, and bears almost every year. I agree with you that the *Melocoton*, *Crawford's Early*, *Cooledge's Favorite*, are more hardy and have suffered less from the curled leaf than other grafted varieties. They suffer less when near the house, and sheltered from the north-west winds. My most vigorous trees, and on the richest soil, have suffered the most; the last three years they have hardly produced a peach. I expect we shall have to depend on our natural and more hardy peach trees.

We have a great promise of grapes this year; crop of strawberries light; gooseberries and raspberries abundant; apples and pears promise well. There is more attention given in this county to apples and pears than formerly. The demand for the New York market—almost in any producable quantity—with the facilities of railways for its conveyance, is making it profitable to the farmer to set out orchards in this genial region to both these fruits. The pear succeeds remarkably well. J. A. B.—*Mexico, Oswego county, N. Y.*

OSKALOOSA, IOWA.—This is a beautiful country, and the amount of improvement, when we consider the age of the country, is truly astonishing. Here stands a flourishing city, containing some twelve or fifteen hundred inhabitants, where ten years ago not *one* human habitation could be seen. The Indians gave possession of this country in 1843. *Now* you may stand upon the top of a large brick house in Oskaloosa, and see at one view thousands of acres of the richest land, all enclosed with good fences, rolling in gentle undulations as far as the eye can reach, and covered, principally, with dark green corn, here and there interspersed with small patches (as appearing in the distance, though many of these patches contain forty or fifty acres,) of golden stubble, from which are being taken wheat, oats, and hay, which may be seen rising up into groups of stacks, presenting their yellow tops above the green corn in all directions. Dozens of neat and newly painted farm houses may also be seen scattered over the prairie.

A number of young apple orchards are just beginning to bear in this vicinity, and I saw, a few days ago, some beautiful specimens of the *Pound Royal*, *Belflower*, *Warren*, or *Hollow Cored*, *Pippin*, *Rawles' Janette*, *Wells' Gate*, &c., all large and smooth, without spot or blemish; and finer *Isabellas* and *Catawbas* I have never seen, than are hanging on the vines in several of the gardens in this place. We have a flourishing agricultural society in this county, which holds its next fair at this place on the 15th of October. "What!" you are ready to exclaim, "all this in the 'back woods,' one hundred miles west of the Mississippi river?" Not a bit of "back woods" about it, sir; for you will see more taste, intelligence, and refinement here than you will find in many places in the older States, where the country has been settled fifty years. Don't say "back woods" to us—we are *beyond* the "back woods." R. SEEVERS.

Editor's Table.

THE GENESEE FARMER FOR 1854.—The proprietor of the *Genesee Farmer*, encouraged by the liberal support long extended to this journal by its friends and patrons, announces that the FIFTEENTH VOLUME of the present series, to commence in January, 1854, will contain a quarter more reading matter than any of its predecessors, and be otherwise much improved, without any increase in price.

Since the undersigned began his labors to foster a taste for agricultural reading in the United States, at least fifty journals devoted to rural affairs have been started to meet the demand for such information as they might be able to supply. Instead of harboring unkind feelings toward these numerous competitors, we have rejoiced at their success, knowing that there must be room for fifty more agricultural papers long before one farmer in ten will be a *reading* as well as a *working* cultivator of the soil. To increase the usefulness by extending the circulation of the *Genesee Farmer*, the undersigned will pay the following premiums on subscriptions to his next volume:

Fifty dollars to the person who shall procure the largest number of subscribers in any county or district in the United States or Canadas; forty dollars to the one who shall procure the second largest list of subscribers as above; thirty dollars to the one procuring the third largest list; twenty dollars to the one procuring the fourth largest list; and ten dollars to the one procuring the fifth largest list, at any time before the first of April, 1854, when the premiums will be paid in cash. Subscriptions to be received at the lowest club prices. The volume for 1854 will be printed on good paper, with new type, bought expresly for it. A gentlemen, graduate of the University of Vienna, who is familiar with the languages of those nations in which the science of agriculture is most cultivated, will aid us in translating for the *Farmer* whatever can instruct or interest its readers. This gentleman is by profession a civil engineer and architect — branches of knowledge intimately connected with the progress of rural arts and sciences. The general character of our paper is thus pithily stated by the Hon. MARSHALL P. WILDER, President of the Massachusetts Board of Agriculture, and of the United States Horticultural and Agricultural Societies, in a letter now on our table, which closes as follows.

"I have always had the GENESEE FARMER. *It is, without favor or affectation, the best paper in the country.* MARSHALL P. WILDER."

As our club price to each subscriber is only thirty-seven cents a year, no matter how many other agricultural journals one may take, to patronise the *Farmer* cannot impoverish him.

DANIEL LEE.

THE STUDY OF INSECTS. — Almost every mail brings us papers which show the lamentable want of more knowledge among farmers of the natural history of insects. A correspondent in the September number of the *Pennsylvania Farm Journal* recommends the use of lime and brine in the preparation of seed wheat, to prevent the attacks of the Hessian fly. Now, Pennsylvania returned more wheat, by about a million of bushels, at the last census than any other State in the Union, and her cultivators of this important staple ought to be well posted up in all that relates to it. With due respect for the writer (for we are all liable to err), we beg to inform him and his readers, should they see this article, that he is wrong in two important particulars. First, In keeping his wheat so long in brine as to "swell the seed considerably" before he limes it, as the salt will kill the germs of many good seeds so soon as the brine penetrates them sufficiently to make them *swell*. Secondly, Neither the eggs nor young of Hessian flies are on wheat at the time it is sown. The insect always deposits its eggs on the leaves of the plant, either in autumn or in the spring. It is a good practice to wash seed wheat in strong brine, and dry it at once in recently slaked lime, to destroy the sporules or seeds of smut, not insects. As suggested by the writer in the *Farm Journal*, salt and lime tend to produce bright, firm culms, or straw, in wheat; and for this purpose some of the best wheat-growers in Western New York sow, at the time of seeding, from three to five bushels of salt, and from five to ten of lime, per acre. On good limestone land, salt alone is used.

DOMESTIC CULTURE OF THE GRAPE.—The *Charleston Mercury* states that Mr. MCDONALD, residing near Aiken (S. C.), has devoted himself to the culture of the grape with a success that promises to naturalize this branch of agriculture in the State. He has an extensive vineyard, in which may be found the best varieties of foreign and

native vines. He has made considerable quantities of wine, which amateurs have tasted and pronounced choice, and he is prepared to go ahead on the strength of past success.

As population increases, and labor becomes more abundant, wine will be made in such quantities as to be esteemed one of the staples of the Republic. It has climates admirably adapted to the growth of the vine; and it actually contains more varieties of native grapes than all the world beside. There is not a State or Territory from Maine to Oregon, and from the great lakes to the Gulf of Mexico, in which indigenous grapes do not flourish. From some of these native varieties, or their crosses, science and labor will produce fruit of inestimable value.

MAMMOTH WHEAT, AND HOW TO RAISE IT.—That there are giants as well in the vegetable as in the animal nations, may be proved by a specimen of many-headed wheat from a single seed, now on exhibition at our office. There are 114 stalks, each having a fully developed head—all the family of one grain of wheat, planted last fall. Allowing each grain to yield 35 grains (a very low average), there would be about 4000 grains. In a bushel of wheat, weighing 60 pounds, there are 408,000 grains. This is on the supposition that the wheat is of the best quality; the average is said to be 520,600 grains. At this rate, 180 such stools of wheat would yield a bushel. This monster growth was raised on Ex-Governor DEWEY's farm, near Lancaster, and handed to us by his father, who is considered one of our first farmers. He is of the belief that too much wheat is commonly sown to the acre, and that more attention should be given to preparing the soil.—*Grant Co. Herald.*

The father of the Governor is quite right in his notion that too much seed wheat is usually sown per acre, and that more attention should be paid to the preparation of the land. If we cultivated wheat as we do corn, by plowing between the rows, killing all weeds, letting in more sunshine where the plants are luxuriant, and making the soil richer where they are small and feeble, our harvests might be brought up to an average of thirty bushels per acre. Our practice and its results, in wheat culture, are far, very far, below the possible—below, far below, the *profitable.*

NOTICES FOR CORRESPONDENTS.—We have received and shall publish in our next, several valuable letters and articles, intended for this number of the *Farmer.* Mr. A. B. COLLVER, of Winchester, Douglass county, Oregan, will please accept our thanks for his communication; and our readers in Oregon and California are respectfully requested to write often, giving an account of the progress of agriculture on the west side of the Rocky Mountains. We will give Mr. COLLVER the information he desires about reapers and seed-drills in a private letter, and publish his with comments in our November number. The letter of our friend R. M. O., of Greenfield, Saratoga county, will appear in our next. "The Making, Saving, and Application of Manures" is a subject of universal interest, and a branch of husbandry which is susceptible of great improvement.

A subscriber at Lakeville, desires information respecting the burning of coal for kitchen purposes, and asks: "A ton of coal is equal to how many cords of wood, without regard to porosity?" In Rochester, where wood is $5.00 a cord, and coal 10 cents a bushel, we think coal to burn in a small furnace and heat smoothing-irons, cheaper than wood; but for washing, cooking, and warming rooms, a cord of hard wood that will weigh from 3000 to 4000 pounds *dry* is nearly equal in value to a like weight of dry coal. In converting wood into coal, a great deal of heat is generated and lost. This is an important matter in domestic economy; and we will make its philosophy perfectly plain in a future number.

Mr. H. T. WAKEFIELD's request about the construction of ice houses will receive due attention.

The communication about protecting bees from moths, and separating chess from wheat, is thankfully received, and marked for insertion.

The suggestions of "C. W." in reference to the new plan for burning lime, which we published in the July number, are timely and to the point. He has seen it tried, and pronounces it "a failure."

"A Michigan Farmer" has our sympathies, and his letter will appear in our next. We have set our faces against all frauds and quack nostrums in rural affairs. Wool-growing has been too much the subject of speculation and frauds in various ways. Other communications have been received, and will meet with due attention.

We have only room to say that a National Exhibition of imported and American horses will take place at Springfield, Mass., on the 19th, 20th, 21st, and 22d of October instant, under the auspices of the United States Agricultural Society. It is likely to be a grand affair, it being the first of the kind ever attempted in this country.

STATE FAIRS FOR 1853.

New Hampshire,	Oct.	5, 6, 7
Maryland,	Oct.	25, 26, 27, 28
Illinois, at Springfield,	Oct.	11, 12, 13, 14
Indiana, at Lafayette,	Oct.	12, 13, 14
Wisconsin, at Watertown,	Oct.	4 to 7
Virginia, at Richmond,	Nov.	1, 2, 3, 4
Upper Canada,	Oct.	5 to 7
Southern Central Agricultural Society, Augusta, Ga.,	Oct.	17 to 20

Inquiries and Answers.

PLEASE inform me through your paper what the color of the Short-horn Durham is, as there are a number of people in this county who have deep red cattle, and others who have entirely white cattle, and they all profess to have the pure Short-horn Durhams. A SUBSCRIBER.—*Venango County, Pa.*

Thorough-bred Short-horns are by no means so uniform in color as the Devons, or even the Herefords; and it is not impossible that there may be pure red or pure white of this celebrated stock, as there are plenty having both colors upon them.

IN the *Genesee Farmer* for July, I notice a strange and entirely new idea to me. You say that "without the contact of the anther dust that falls from the tassels of the plant upon the stigmas or ends of the silk, not a kernel of corn would grow." Now I would be very much pleased to have you give an explanation of it through the *Farmer*. J. J. SCRAGGS.—*West Point.*

We hardly know what explanation will be satisfactory to our correspondent. If he doubts the correctness of our statement, let him tie a piece of muslin over the end of an ear of corn just as its silk begins to appear, so as to prevent any anther dust from falling on the stigmas, and see how many seeds the ear will bear. The contact of the male and female organs of plants, or the union of the vital atoms peculiar to the procreative powers of each, is indispensable to the production of a new generation. If our friend will consult any school book on botany, it will inform him that the anther dust of maize is alone endowed with fertilizing energy.

WILL you be so kind as to give your readers the benefit of some remarks in relation to white clover—its alimentary, soil-exhausting, and nitrogen-collecting (or nitrogen-retaining) properties—as compared with red clover; and also of kindred remarks in regard to carrots? Remarks in regard to the value of the Yellow Locust tree as a fertilizer of grass grounds, and the manner of propagating it for this purpose, would be thankfully received.

What is the price of back volumes of the *Genesee Farmer*, bound, and the postage prepaid. H.—*Valley Farm, N. H.*

To answer the above inquiries fully would occupy much space, and demand not a little research. We can state, however, that so far as nitrogen and alimentary matters are concerned, white and red clover do not materially differ. One hundred pounds of dried white clover contains some two per cent. more ashes when burnt than a like weight of red clover; and reckoned by the ton, white clover is more exhausting to the soil, if the crops were removed.

The dry matter in one hundred pounds of carrots is half that contained in one hundred pounds of green clover; and therefore, estimated in pounds, clover is worth more than carrots. Leaving the water in both out of the account, and one hundred pounds of the roots exceed in nutritive value a like weight of the best clover hay.

Neither the Yellow Locust, nor any other growing tree or plant, while growing, can fertilize the soil for grass, or any other crop. Some trees injure the soil less than others, and Locusts perhaps as little as any. We have cut up and burnt where they grew many thousands of Yellow Locusts this season, and have some fifteen acres left, where we want to make a meadow. Where we cut wood and rail timber in permanent woods, there we shall sow Locust seed and transplant young trees.

Back volumes of the *Farmer* are from 50 to 60 cents each, according to their covers.

IN answer to the inquiry in the July number of the *Farmer* for the best method of keeping worms from hives of bees, I would recommend the destruction of the bee-moth, or miller. My plan for capturing is as follows:—Take a board of from eight to twelve feet long, and from ten to twenty inches wide; place it within a rod of the hive, one end on the ground, the other some four feet high, on the fence, or some place fixed for it to rest; then put another board on the top some two inches narrower, with room between the two for the millers to secrete themselves. It is to chance that I am indebted for the discovery, and yet it may be already known. I have caught great numbers of them the present season. It would be best to keep all rubbish, or places for the secretion of vermin, at a greater distance from the hives. I use HALL'S Self-protecting Hives, which I believe to be the best for the bees to eject any worms that may invade their premises. This, together with the destruction of the millers, gives the bees a chance, and I believe that they will improve it and obtain the victory.

I wish some apiarian would try the above plan, and give the result in the columns of the *Farmer*. Place your miller-traps on either side of your hives, if convenient. ALEX. TITUS.—*York Town.*

Mr. TITUS has set an excellent example to all intelligent farmers. Let them not keep their valuable knowledge to themselves, but give it freely to their brother cultivators the world over. To hundreds of our readers, his "miller-traps" will be worth more to them than the cost of ten years' subscription for this cheap journal.

Choice Poultry for Sale.

THE SUBSCRIBER offers for sale one hundred pairs of Brahma Pootras; also, Shanghæs, Cochin Chinas, and Bolton Grays; all warranted pure. THOS. WEIGHT.
Utica, N. Y., Oct. 1, 1853.—3t.

Horse Powers,

ON the Endless-Chain principle, consisting of Emery's, Wheeler's, and White & Prentiss', the best manufacturers.

Threshers, Separators, and Winnowers, Combined Threshers and Separators.

The above are warranted to give satisfaction. For sale at the lowest cash prices, at the State Agricultural Warehouse. LONGETT & GRIFFING,
Sept. 1, 1853.—2t. No. 25 Cliff street, New York.

SCRIBNER'S READY RECKONER,

FOR SHIP BUILDERS, BOAT BUILDERS, LUMBER MERCHANTS, FARMERS, AND MECHANICS:

Being a correct measurement of Scantling, Boards, Plank, Cubical Contents of Square and Round Timber, Sawlogs, Wood, &c., comprised in a number of tables; to which are added Tables of Wages by the Month, Board or Rent by the Week or Day, and Railroad Distances. Also, Interest Tables, at seven per cent. By J. M. SCRIBNER, author of "*Engineers' and Mechanics' Companion*," "*Engineers' Pocket Table Boook*," &c. &c.

SCARCELY is it possible to add to the recommendations of the above book, more than to give its title page. Every one who is engaged in buying, selling, measuring, or inspecting lumber, of any kind, will at once appreciate a work of this kind. No pains or expense has been spared in revising or enlarging this edition, to make it in every respect convenient and accurate.

The Log Table was computed by drawing DIAGRAMS for each and every log, from twelve to forty-four inches in diameter, and the width of each board taken, after taking off the wane edge. The sum total of each board constitutes the amount each log will give; and if there can be any dependence placed upon such strictly mathematical accuracy, no one will hesitate for a moment to abide the results here given, as the method adopted by the author can result in nothing less than strict honesty and mathematical accuracy, to the parties interested.

The best evidence of the usefulness and popularity of this book, is the rapid and extensive sale of over 75,000 in a few years. We do not hesitate to say that no book of its size and price contains more useful or correct tables.

In all new and lumber countries the book will be found very convenient, as it comprises much that is useful to the farmer, mechanic, and business man.

Price, 25 cents; 5 copies for $1, post-paid.

☞ Agents wanted to sell the above. Address

GEO. W. FISHER,
October 1, 1853.—1t. Rochester, N. Y.

M'Lane's Worm Specific.

THE following, from a customer, shows the demand which this great medicine has created wherever it has been introduced:

BLOSSBURG, Tioga Co., Pa., March 30, 1850.

Gentlemen:—In consequence of the *great consumption* of your "Worm Specific" in this place and vicinity, we have entirely exhausted our stock. We should feel obliged by your forwarding, via Corning, N. Y., twenty dozen, with your bill, on the reception of which we will remit you the money.

From the wonderful effects of said "Specific" in this neighborhood, there could be sold annually a large quantity, if to be had, (wholesale and retail) from some local agent. If you would compensate a person for trouble and expense of vending, I think I could make it to your advantage to do so. Yours, respectfully,

WM. M. MALLORY,
Messrs. J. KIDD & Co. Per W. E. PORTER.

☞ Purchasers will please be careful to ask for Dr. *M'Lane's Celebrated Vermifuge*, and take none else. All other Vermifuges, in comparison are worthless. Dr. McLane's genuine Vermifuge, also his Celebrated Liver Pills, can now be had at all respectable Drug Stores in the United States and Canada.

Improved Fowls for Sale.

HAVING kept for several years the very best fowls to be procured, and having the past season added to my stock some exceedingly beautiful specimens, I have now a great number of fine young pairs, certainly as good as can be found in the country, which I will sell at a much lower price than that charged by fowl-dealers. I will sell the following varieties at five dollars per pair:

White Shanghæ, Black Shanghæ, Buff Shanghæ, and *Cochin China;* and *Brahma Pootra*, and *Speckled Shanghæs* (a very beautiful bird), at ten dollars per pair.

These fowls will be ready for delivery by the first of September, and I will coop them carefully, with feed, water, &c., and send by railroad or express, as desired, without charge, and warrant every fowl sent to be pure and fine. Orders are solicited. WM. VICK.

Rochester, N. Y., August 1, 1853.

Cuttings of the best kind of Basket Willow,

WITH directions for planting, for sale at $5 a thousand, by WM. H. DENNING,
Oct 1, 1853. Fishkill Landing, Dutchess Co.

Farm for Sale, in Rock County, Wisconsin.

THE SUBSCRIBER offers for sale his farm, lying within seven miles of the village of Beloit, and nine of the city of Janesville, consisting of 305 acres—prairie, timber, and meadow—under a good state of improvement, a great part being seeded to timothy.

There is a large and costly stone house on said farm, from which may be had a view of the Valley of Rock River, for many miles in extent.

There is also a bearing Orchard of grafted fruit on the farm, living water, and most other conveniences belonging to older farms in the Eastern States, not excepting railroad facilities.

The limits of this advertisement preclude the possibility of a further description; it will suffice to say, that this is one of the best farms in a most delightful country.

Price, $20 an acre, if sold before the first of December next. JOHN L. V. THOMAS,
Beloit, Rock county, Wisconsin.

P. S.—There will be sold also to the purchaser of the farm, if desired, a stock of Horses and Cattle, Farm Implements, &c., the present owner being compelled to undertake other business.

October 1, 1853.—1t*

Evergreen Trees,

OF the following kinds and sizes, we can supply to Nurserymen and others to a large amount, and at very low prices:

Norway Spruce Fir, from 8 inches to 6 feet.
Black Spruce Fir, from 8 inches to 6 feet.
European Silver Fir, from 6 inches to 4 feet.
Balsam Fir, from 1 foot to 12 feet.
Hemlock, from 1 foot to 4 feet.
Scotch Fir, from 6 inches to 8 feet.
Austrian Pine, from 6 inches to 8 feet.
White Pine, from 1 foot to 12 feet.
American Arbor Vitæ, from 1 foot to 5 feet.
Siberian Arbor Vitæ, from 6 inches to 4 feet.
Red Cedar, from 1 foot to 7 feet.
Lebanon Cedar, from 6 inches to 2 feet.

Those who wish for any of the above-named articles, can learn our exact prices by addressing us, and stating the number they wish to purchase. To large buyers we make a proper discount. Orders received *early* we can fulfil most perfectly, while if they are *late* we may not be able to do so well by them. D. S. MANLEY & BROTHER.

Buffalo, October 1, 1853.—2t.

Chinese Fowls.

FOR SALE, a number of pairs of genuine Black Shanghæ Chickens, strongly marked, and embracing all the fine points of Chinese fowls. No one wishing a superior breed of fowls for laying or for the table, will be disappointed by procuring this variety. Also, a few pairs of the celebrated Brahma Pootra stock.

Orders received from any part of the country will be promptly executed, and the fowls caged in such a manner that they can be transported safely for any distance.

Terms—Black Shanghæ, $5 per pair; Brahma Pootra, $10 per pair.

Address the subscriber, at the office of this paper.

CHAS. W. SEELYE.

1000 Book Agents Wanted.

INTELLIGENT and industrious men wanted in every part of the United States, to engage in the sale of the best assortment of ILLUSTRATED POPULAR AND USEFUL BOOKS published in the country.

Men of good address, having a small capital of $25 to $100, can do well by engaging in this business, as the inducements offered are of the most liberal character.

For further particulars, address (postage paid)

ROBERT SEARS, Publisher,
October 1, 1853.—2t 181 William st., New York.*

A Chance to Make Money!

PROFITABLE AND HONORABLE EMPLOYMENT!

THE SUBSCRIBER is desirous of having an Agent in each county and town in the Union. A capital of from $5 to $10 only will be required, and any thing like an efficient, energetic man can make from $3 to $5 per day—indeed, some of the Agents now employed are realizing twice that sum. Every information will be given by addressing (postage paid) WM. A. KINSLER,

Box 601, Philadelphia Post Office.

October 1, 1853.—1t*

BUFFALO NURSERY.

D. S. MANLEY & BROTHER, ...PROPRIETORS.

Situated on Main Street, two miles above the American Hotel.

WE wish to call the attention of the public to our Nursery of FRUIT AND ORNAMENTAL TREES, SHRUBS, AND PLANTS, of all that is grown in the best establishments in the country. Persons wishing to buy any of the articles named below, can do no better than to buy of us.

Standard Apples, Pears, Cherries, Plums, Peaches, of all the best varieties—fine trees, from one to five years old.

Dwarf Apples, worked on Paradise and Doucain stocks.

Dwarf Pear Trees, worked on Angers Quince stocks, of all the desirable kinds. Trees from one to three years old can be furnished by the hundred or by the thousand.

Quinces—Good strong plants, in any quantity.

Hardy Grapes—Plants of all the finest varieties, of one, two, and three years of age.

Foreign Grapes—A very good selection.

Currants, of all the new and old kinds—a very fine stock of one and two year old plants.

Raspberries, of the best kinds, and very good plants, in any quantity.

Gooseberries—A first rate assortment of varieties, and capital plants.

Strawberries—An excellent selection of the best sorts—a very general assortment.

Rhubarb, or Pie Plant—A good stock of Tobolsk, Victoria, Downing's Colossal, Giant Hybrid, Wisconsin Mammoth, &c.

Asparagus—Good one and two year old plants.

Deciduous Ornamental Trees—We have a fine stock, consisting of the best of European, American, and Asiatic kinds.

Evergreen Trees—Perhaps the most excellent and desirable stock in the country for size and shape. Trees from six inches to ten feet in height, we can furnish, of many kinds.

Ornamental Shrubs—We have a very large stock of Ornamental Shrubs, and can supply most any quantity, of any variety, and the plants are very fine indeed.

Evergreen Shrubs—Not a large but an excellent stock, consisting of such varieties as are found by experience to be desirable in this climate.

Climbing Shrubs—The utmost pains have been taken to propogate all of the varieties of Climbing Shrubs which succeed in this latitude, and now we have an excellent stock.

Roses—A stock of sufficient variety, and of surpassing merit. A stock of over a hundred of the very best kinds cultivated in Europe or America, propogated with the utmost care, and in every way worthy of attention from the most critical in Rose culture.

Dahlias—Our Dahlias—say eighty varieties—are undoubtedly as fine as can be found in this country.

Paonies—Twenty varieties of these most desirable plants. Several varieties of the splendid CHINESE TREE PAONIES.

☞ Strangers to our locality are referred to Messrs. Jewett & Thomas' Directory and Map of the city of Buffalo, for the year 1853. Our residence and Nursery Grounds are are exactly delineated on their map.

☞ We furnish Catalogues to all who apply for them. From the extensive increase which we are making in our plantations, it is quite necessary that our business should be done on cash principles. All orders sent to us by mail will receive perfectly prompt attention, and when persons do not know *exactly* what they want they had best leave selections with us. Our *packing* is done in the best manner, and all goods carefully shipped as directed in orders. The strictest care is used to ensure exactness in all our business transactions.

October 1, 1853.—2t.

Fruit Trees, &c.

CHARLES MOULSON offers for sale a large stock of Fruit Trees suitable for transplanting this autumn, consisting of select varieties of Apples, Pears, and Cherries, standard and dwarf; Peaches, Plums, Apricots, and Quinces.

Also, Strawberries, Raspberries, Currants, Gooseberries, and Grape Vines, in great variety.

Rhubarb and Asparagus Plants.

Also, 50,000 Seedling Apples, for stocks.

Trees will be packed suitable for transportation, when necessary.

The Nursery is situated on Union street, a few rods north of New Main street.

Rochester, October 1, 1853.

GENESEE VALLEY NURSERIES.

A. FROST & CO., Rochester, N. Y., solicit the attention of Amateurs, Orchardists, Nurserymen, and others, about to plant, to their stock of Fruit Trees, which is the largest and much the finest that they have ever offered, consisting in part of the following:

Standard Fruit Trees—Of Apple, 60 varieties; Pear, 75 varieties; Cherry, 50 varieties; Plum, 25 varieties; Peach, 30 varieties; Nectarine, 6 varieties; Apricot, 6 varieties; comprising every sort of merit.

Dwarf Fruit Trees, on the best stocks of Apple, Pear, and Cherry, and of the above large collection of sorts.

Small Fruits—Currants, 15 varieties; Gooseberries, 100 varieties; Grapes, native and foreign, 25 varieties; Raspberries, 5 varieties; Strawberries, 20 varieties, etc.

Deciduous and Evergreen Trees, for Lawns, Parks, Streets, etc.

Evergreen and Deciduous Shrubs, in great variety, including 400 sorts of the Rose.

Bulbs, in varieties—Crocus, Crown Imperials, Gladiolus, Hyacinths, Lilies, including the lancifolium sorts, Tulips, etc., etc.

Chrysanthemums—The finest new Pompone, or Daisy, varieties.

Dahlias—The best and highest prize varieties shown in England during 1851-2, including all the best old sorts.

Green-house and Bedding Plants, etc., etc., of every description.

Plants for Hedges—Buckthorn, Osage Orange, Privet, American Arbor Vitæ (White Cedar), Norway Spruce, etc.; all of which will be sold at the lowest rates.

All articles are put up in the most superior manner, so that the plants, etc., may go thousands of miles, and reach their destination in perfect safety.

Parties giving their orders may depend that perfect satisfaction will be given them.

The following Catalogues, containing the prices, are published for gratuitous distribution; but, as we are obliged to prepay the postage if they are mailed, correspondents will please enclose a one cent postage stamp for each Catalogue wanted:

No. 1.—A Descriptive Catalogue of Fruits, Ornamental Trees, Shrubs, Roses, etc.

No. 2.—A Descriptive Catalogue of Dahlias, Verbenas, and other bedding plants, etc., etc., including many new articles which may be introduced up to the time of its publication, and is issued every spring.

No. 3.—A Wholesale Catalogue—a trade list just published for the fall of 1853 and spring of 1854—comprising Fruits and Ornamental Trees (such as Evergreens etc.), which are offered in large quantities.

Rochester, October 1, 1853.—1t.

WALWORTH NURSERY.

THE SUBSCRIBER has for sale

20,000 Apple Trees, some quite large.
20,000 Dwarf Pears, best varieties.
10,000 choicest varieties Peach Trees.
1,000 large Mountain Ash.
2,000 Horse Chestnut.
3,000 large stocky Balsam Fir.

All Trees sold at the *very lowest prices*, and Catalogues furnished to applicants.

ALSO, POLAND OATS.

150 bushels of the celebrated Poland Oats, that weigh 42 pounds to the bushel, for sale at one dollar per bushel. Last spring I could not supply one-quarter of the seed ordered.

T. G. YEOMANS.

Walworth, Wayne Co., N. Y., Oct. 1, 1853.—1t*

Albany Drain Tile Works,

No. 60 Lancaster Street, Albany, West of Medical College.

THE SUBSCRIBER, successor to JOHN GOTT, formerly A. S. BABCOCK & Co., is prepared to furnish Draining Tile, of both Horse-shoe and Sole patterns, at from $12 to $18 per thousand pieces. The Tile are more than a foot in length, and fully equal to any of American or foreign manufacture. They are so formed as to admit water at every joint, and drain the land perfectly from twelve to twenty feet on each side, according to the nature of the soil.

Also, Large Tile, for drains about dwellings, yards, &c., at from $4 to $8 per one hundred pieces. These are cheaper and more durable than brick drains.

Full directions for preparing ditches, laying Tile, &c., will be sent free to those addressing the subscriber, postpaid. The Tiles can be sent safely any distance. Orders are respectfully solicited. DAVID CALLANAN,

October 1, 1853.—2t. Albany, N. Y.

Fruit and Ornamental Trees, &c., &c.

THE subscribers have the pleasure of announcing an immense stock of Trees, &c., for the autumn trade, embracing—

Standard Trees, for Orchards.
Dwarf and Pyramidal Trees, for Gardens.
Ornamental Trees, for Streets, Parks, and Pleasure Grounds.
Rare and Beautiful Lawn Trees.
New and Rare Weeping Trees.
Evergreen Trees, embracing the rarest species of Pines, Firs, Spruces, Yews, Cedars, Junipers, &c.
Hardy Flowering Shrubs.
Roses, of all classes, and embracing the newest and best sorts.
Dahlias, the finest English prize sorts.
Chrysanthemums, including the finest of the new Pompone varieties.
Phloxes and *Pæonies*, superb collections.
Bedding Plants, a complete assortment.
Bulbous Roots, just imported from Holland, and of the first quality.
Hedge Plants.
Box Edging.
Rhubarb, Asparagus, &c., &c.

The favorable season has given every thing a vigorous and fine growth.

All orders, whether for large or small quantities, executed with the greatest care, and in strict compliance with the wishes of the purchaser.

Packing done in the most secure and skilful manner, so that parcels can be transmitted thousands of miles in safety. Nurserymen and dealers in Trees will be supplied on the most liberal terms.

The following Catalogues are sent, *gratis* and *pre-paid*, to all who apply and enclose one postage stamp for each:

No. 1, Descriptive Catalogue of Fruits.
No. 2, do do Ornamental Trees, &c.
No. 3, do do Dahlias, Green House Plants, &c.
No. 4, Wholesale Catalogue.

ELLWANGER & BARRY,
Mount Hope Nurseries, Rochester, N. Y.
September 1, 1853.—1t.

River Bank Nursery,

OPPOSITE THE RACE COURSE, ON NORTH ST. PAUL STREET.

Office, 106 State Street, Rochester, N. Y.

THE attention of Nurserymen, Orchardists, and Fruit Growers, is requested to our very thrifty and healthy stock of Fruit Trees. We believe the stock is equal, in all respects, to any other in the market, and will be sold at as low prices. We intend to make this a reliable establishment, and we solicit patronage with a strong confidence that we shall be able to give satisfaction. We have for sale this fall—

30,000 Apples, 3 and 4 years old,
35,000 do 2 do
100,000 do 1 do
5,000 Cherries, 2 years from bud.
15,000 do 1 do
500 Pears on Quince, 4 years from bud (now bearing.)
3,000 do do 2 do
2,000 do do 1 do
2,000 Peaches, 2 years from bud.
4,000 do 1 do

The above comprise all the varieties of merit. We have also an assortment of Plums, Apricots, Nectarines, &c., &c. Raspberries, Gooseberries, and Currants, in great variety. We also offer to Nurserymen—

150,000 Apple Seedling, 1 year old.
50,000 do 2 do
50,000 Cherry Seedlings, 1 year old.

All orders will be promptly and carefully executed, and no pains will be spared to give satisfaction.

GEO. H. CHERRY & Co.

☞ We particularly invite the attention of Western Nurserymen to our young stock. It is very thrifty, and can be removed with safety, as it has not been unnaturally forced, and will be sold at a reasonable price.

September 1, 1853.—2t.

First Premium Railroad or Endless Chain Horse Powers and Threshers.

WE will make it an object to all who want the above, to purchase of us.

Before buying, call at 68 State street, Rochester, and be convinced.

BRIGGS & BROTHER.
September, 1, 1853.

Highland Nurseries, Newburg, N. Y.

A. SAUL & CO., in calling the attention of their patrons, and the public in general, to their very extensive stock of FRUIT AND ORNAMENTAL TREES, SHRUBS &c., which they offer for sale the coming autumn, would remark, that owing to the past summer being one of the most favorable for the growth of Trees which they have had for many years in this locality, their stock of Trees and Plants, in every department, is *larger*, more *thrifty*, and in every respect finer than usual.

To particularize within the limits of an advertisement would be impossible. They therefore refer planters and dealers in Trees to their Catalogue, a copy of which will be sent by mail to all *post-paid* applicants for the same, on enclosing a postage stamp.

They invite especial attention to their *very large* stock of Standard and Dwarf Pear and Cherry Trees; also, Plum, Peach, Apricot, and Nectarine Trees; as well as Grape Vines, Gooseberries, Currants, Raspberries, Strawberries, &c., in every known variety, together with all other plants, &c., usually kept by the trade.

500,000 strong two years old Osage Orange Plants, in three different sizes, at $10, $8, and $6 per 1,000.

Buckthorn Plants, two years old, at $8 per 1,000.

Highland Nurseries, Newburg, N. Y., Sept. 1, 1853.—2t.

Fruit and Ornamental Trees.

T. C. MAXWELL & BROS. would invite the attention of purchasers to the superior stock of Fruit and Ornamental Trees which they offer for sale this fall. Their Trees are of the most approved varieties, and *unexcelled* in health, vigor, and beauty; and they feel confident that they can give entire satisfaction to all who may favor them with their orders, both in prices and quality. Purchasers are requested to call and examine.

60,000 Apple Trees, large and thrifty.
20,000 Pear do more than half Dwarf, of the best kinds, and unequalled in size and beauty.
20,000 Cherry Trees, first quality, in every respect.
5,000 Peach do one year from bud.
2,000 Plum do mostly on Peach.
2,000 Apricot do one and two years—fine.
2,000 Quince do
6,000 Grape Vines, mostly Isabella.
3,000 Mountain Ash Trees, large and fine.
1,000 Horse Chestnut Trees large and fine.
3,000 Balsam Fir Trees, two to four years in nursery—fine.
80,000 Arbor Vitæ, for Hedges—8 to 30 inches.

Also, a general assortment of smaller Fruits, Shrubs, Roses, &c.

☞ Trees carefully packed and promptly shipped.

Old Castle Nurseries, Geneva, N. Y., Sept. 1, 1853.—2t.

Geneva Nurseries.

THESE Nurseries are located just half way between Syracuse and Rochester, being fifty miles from each place, and the facilities for shipping trees are equal to any in the State. Our stock of Trees is now extensive. Thirty thousand Cherry, 1 to 3 years old; thirty thousand Peach, 1 year; six thousand Plum, 1 year; one hundred and fifty thousand Apple, 1 to 3 years; five thousand European Mountain Ash, large size; together with a general assortment of other Trees.

STOCK FOR NURSERYMEN.

Five hundred thousand Apples, 1 to 2 years; twenty-five thousand Pear; ten thousand Plum; twenty-five thousand Cherry, five thousand Sweet Briar, 1 year from seed; five thousand European Ash; fifty thousand Osage Orange; twenty thousand White Cedar; five thousand Balsam Fir; six thousand Norway Spruce; two thousand Sugar Maple; two thousand Hemlock; five thousand Asparagus Roots, 1 and 2 years; three thousand Rhubarb; twenty thousand Basket Willow Cuttings.

E. T. & E. SMITH.
Geneva, N. Y. Sept. 1, 1853.

New York Agricultural Warehouse.

HORSE POWERS, Threshers, Fan Mills, Smut Machines, Grain Drills, Hay Presses, Grain Mills, Corn and Cob Crushers, Cider Mills, and a large assortment of Plows, and all kinds of Agricultural and Horticultural Implements.

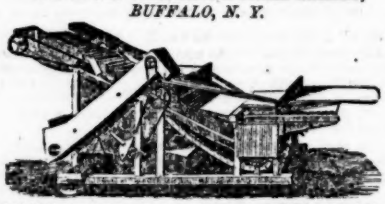
Peruvian Guano, Superphosphate of Lime, Bone Dust, and other fertilizers, of the most superior kinds.

R. L. ALLEN,
Sept. 1, 1853. 189 and 191 Water street, New York.

AGRICULTURAL IMPLEMENT MANUFACTORY

CORNER OF CAROLINE & THIRD STREET,

BUFFALO, N. Y.



Pitts' Patent Separator—Improved Double Pinion Horse Power—Pitts' Corn & Cob Mills, &c.

I HEREBY give notice that since the extension of the patent right on my Machine for Threshing and Cleaning Grain, I have removed to Buffalo, N. Y., where I have permantly located, and erected a large establishment for the future manufacture of the above Machines.

The Separator has been enlarged, improved, and rendered more permanent and durable in all its parts, while the Horse Power for strength, ease, durability and cheapness of repair is not surpassed by any in the United States. This Power is warranted to stand the full strength of eight horses—also to give as much effective or useful power when driven by one or two horses as any other Horse Power, whether constructed on the endless chain or lever principle. It was put on trial at the great exhibition of Horse Powers and Threshing Machines at Geneva, July last, 1852, where it received the New York State Agricultural Society's First Premium "for the best Horse Power for general purposes." The Separator, at the same trial, also received the Society's First Premium.

My Machines will thresh and clean from three to five hundred bushels of wheat per day, and other grain in proportion.

Two hundred of the above Machines are for sale at the Agricultural Works of the subscriber in this city, all warranted to be a better article than can be purchased at any other shop, and if they do not prove on trial to be so, I will take them off the hands of the purchasers at the price they may pay me for them.

I further notify all persons who are purchasing Horse Powers and Separators to be used in California or Oregon, that I will hold them accountable for any infringmants of the rights secured to me by letters patent in the above Machines, as I am manufacturing a Horse Power and Separator expressly designed for that section.

All orders for the above Machines hereafter addressed to JOHN A. PITTS, Buffalo, N. Y., will receive prompt attention. JOHN A. PITTS.

May, 1853—tf. Buffalo, N. Y.

French Zinc Paint.

THIS new and beautiful article of Paint is now offered to the trade and public, ground in prepared linseed oil, for the first time in this country. It has been used successfully in France for the last five years, where it has superseded white Lead as a paint.

The French Zinc when properly prepared and used, makes the most brilliant and durable white in use, and is entirely free from all poisonous qualities.

The French Zinc is not more expensive than white lead, and is prepared in such a manner that it requires no farther preparation for use, than to thin it with Turpentine or raw Oil to the consistency o white lead paint.

The French Zinc is very much whiter, and has a better body, than the New Jersey Zinc.

The French Zinc is offered dry, and prepared as above, in quantities to suit purchasers, at the Manufacturer's Depot, No. 17 Buffalo st., Rochester, N. Y.

July, 1852, M. F. REYNOLDS.

Superphosphate.

NO expense has been spared in the combination of this most fertilizing manure, which contains all the nutritive properties of all plants. It is superior to most of the articles offered for sale under the same name, and is inferior to none, although sold at a much lower price. Put up in bags at $40 per ton of 2000 lbs., cash.

Office of the New York Superphosphate Manufacturing Company, No. 159 West street, New York.

VICTOR E. KNOWLES, Agent.

September 1, 1851.—3t.

HALLOCK'S Ag'l Warehouse and Seed Store.

No. 24, Exchange street, Rochester, N. Y.

[Emery's Patent Premium Railroad Horse Power, Threshing Machine and Separator.]

THE subscriber, late from the establishment of Emery & Co., manufacturers at Albany, where he has been engaged for the past six years, has been appointed their SOLE AGENT in Rochester and Western New York, for the sale of

Emery's celebrated Railroad Horse Powers and Threshing Machines; Circular and Cross-cut Saw Mills, Feed Mills, Corn-stock and Hay-Cutters, &c.

adapted to the Power, and now offers them at manufacturer's prices, with the transportation added, and subject to the warrantee, as follows: "To work to the satisfaction of purchasers as represented in circulars and catalogues, or to be returned within three months, and full purchase money to be refunded." The attention of farmers is solicited, and a careful investigation into the construction of this Power and its comparative merits, as well as price requested, before purchasing elsewhere. He is also agent for their

COMBINED REAPER AND MOWEE,

and keeps constantly on hand Plows, Hay-Cutters, Corn Shellers, Seed Planters, &c., &c., comprising a complete and extensive stock of Agricultural and Horticultural Implements generally, together with a full assortment of Field and Garden Seeds, of the best Imported and Shaker growth.

He is also agent for the sale of Seymour's Grain Drills and Broadcast Sowers, Wheel Cultivators, Gang Plows, Clover Huilers, Cider Mills, Clover Gatherers, Horse Rakes, Scythes and Snaths, Hand Rakes, Grind Stones, &c.

He will be prepared to furnish dealers with Drum and Taylors's well known Scythes; also Manure, Straw, and Hay Forks, Snaths, Rifles, and other haying tools at manufacturers's prices, wholesale and retail.

Particular attention is called to a NEW PLOW, which is believed to be the best cast iron Plow ever offered, and which is warranted to do better work, with less expense of team, than any other Plow heretofore sold in Rochester—while the price is less than any other equally well finished.

The "uniform one-price cash system" will be adopted, with prices as low as the cost of articles, and just compensation for labor and time, will allow.

Farmers and others are invited to call and examine the stock of Machines and Implements, and are assured that no effort shall be wanting to meet promptly the wants af a discriminating public.

☞ Circulars and Catalogues furnished gratis on application personally or by mail. E. D. HALLOCK,

June 1, 1853—tf No. 24, Exchange street, Rochester.

Extra Improved Superphosphate of Lime for Sale.

THE subscriber, at additional expense, has recently made important improvements in the manufacture of this well tested and valuable manure, and is now prepared to furnish an article assuredly equal, if not superior, to any in the market, at the lowest cash prices.

Put in bags of 50, 100, and 150 lbs. each, and branded "No. 1 Superphospate of Lime." Manufactured and sold by WM. PATTERSON,

Divison Street Wharf, Newark, N. J.

AGENTS:

HASKELL, MERRICK & BULL, 10 Gould-st., N. Y.
H. EMERY, Esq., Agricultural Warehouse, Albany.
PHITTIER & FULLER, Hallowell Maine.
E. GREEN, Esq., Easton, Penn.
S. CHASE, Esq., Middletown, Conn.

July, 1853—4t.

THE HORTICULTURIST,

And Journal of Rural Art and Rural Taste.

EDITED BY P. BARRY, AUTHOR OF THE "FRUIT GARDEN."

THE *Horticulturist*, as its name implies, is devoted to Horticulture and its kindred arts Rural Architecture and Landscape Gardening, and will keep its readers advised of every thing new on the subject, either in Europe or America. It is a Monthly Journal of forty-eight pages, beautifully printed on the finest paper and elegantly illustrated. In addition to numerous wood engravings, each number contains a full page engraving on stone, of some new, rare, and valuable fruit or flower, and is one of the most *beautiful* as well as the most useful Monthly Journals published in the world. We subjoin a few notices by the press, showing the estimation in which the work is held by our editorial brethren:

We are glad the work has fallen into such excellent hands.—*Louisville Journal.*

We feel that we are doing our readers a real service when we urge them to subscribe for this invaluable monthly.—*Weekly Democratic Press, Chicago.*

We congratulate the public on having so valuable a periodical as the Horticulturist within their reach.—*New York Day Book.*

Its contents are spirited and various, the selections judicious, the illustrations elaborate.—*New York Daily Times.*

A standard work of authority upon all subjects discussed or explained in it.—*Vicksburg Whig.*

There is no work in this country of greater value to the cultivator of fruits.—*Inquirer, Portland, Me.*

It is well got up; its articles able, various, and appropriate.—*Geneva Courier.*

Every man who has land enough for a garden should possess this work.—*Weedsport Advertiser.*

The plates alone are worth the year's subscription. The letter press is of a highly instructive character, and embraces a variety of topics. None who have a taste for the beautiful in nature should be without such a valuable publication.—*Hamilton (C. W.) Spectator.*

There is substantial profit as well as pleasure in cultivating taste in buildings, yards, gardens, &c., and the subscription price would be capital well invested by those who will attend to the contents of the Horticulturist.—*Daily Courier, Zanesville, Ohio.*

Any remarks of our own we fear would add nothing in comparison with the value of such a well conducted work. The plan of coloring the plates is decidedly beautiful, and no person interested in horticultural pursuits should be without it. It seems a wonder to us that horticulturists do not look more to their own interests, than to allow their monthly papers to be received without this indispensible accompaniment. The circulation ought to reach half a million. Although the number issued is already extensive, yet it should be increased, from the fact that it is a work of great merit.—*Port Byron (N. Y.) Gazette.*

This periodical is got up in excellent style, and well sustains its former reputation under its present management. *Middlebury (Vt.) Register.*

We are quite satisfied with the work, and are inclined to believe that, to the mass of readers, the work will be even more acceptible than it was under the charge of the accomplished Downing. We recommend the work cordially to the patronage of our friends and the public.—*Massachusetts Spy.*

Its contents embrace a variety of subjects, treated upon in the most scientific manner. The illustrations are numerous and well executed. We know of no other work of the kind on this continent that can compare with the Horticulturist.—*Daily Spectator, Hamilton.*

This magazine has lost nothing by falling into the hands of its present proprietor, Mr. VICK, of Rochester; for he maintains its neat typographical experience, while the new editor, Mr. BARRY brings to its editorial management abilities of a high order.—*Gazette, Keeseville, N. Y.*

The Horticulturist is almost invaluable to the fruit grower, and to the gardener, and it ought to be in the hands of every one. The new editor, Mr. BARRY, proves his eminent fitness for the post so lately filled by the lamented DOWNING.—*Watch Tower, Adrian, Mich.*

This publication embraces a wide field, and has something instructive for every reader. Its artistical embellishments and mechanical execution are of the highest order; for this we give credit to the publisher. Its editorials are practical, scientific, varied, and instructive. Its correspondence embraces some of the ablest horticultural writers in the Union.—*Register and Examiner, West Chester, Pa.*

This useful monthly, instead of losing interest as many feared it would in consequence of the death of its lamented proprietor and editor, Mr. DOWNING, continues to fully maintain its reputation. In fact the present editor and and publisher appear to be using their best endeavors to raise it higher in public estimation than before. It is an eminently practical work, and therefore well fulfills its promises. No one who has anything to do with gardens, trees, shrubs, plants, or flowers, should fail to be among its readers.—*News and Advertiser, Middletown, Conn.*

TERMS—$2 per year, in advance. The volume commenced on the 1st of January last, and we can supply back numbers from that time. Those who prefer can commence with the (half year) July number.

COLORED PLATES.—Still further to add to the value of the work, and meet the improving taste and increasing wants of the horticultural community, an edition is published with COLORED PLATES, each number containing a full page engraving of some new, rare, and valuable fruit or flower, correctly colored from nature by the best living artists in this line. This is a new and important feature, in this country. Price $4 a year, in advance.

Address JAMES VICK, JR., PUBLISHER, *Rochester, N. Y.*

THE WATER CURE JOURNAL.—A New Volume.—Now is the time to subscribe.—Published monthly, in a beautiful quarto. Illustrated with engravings, exhibiting the Structure, Anatomy, and Physiology of the Human Body, with familiar instructions to learners. It is emphatically a Journal of Health, designed to be a complete Family Guide in all diseases.

TERMS—Only One Dollar a Year, in Advance. Address, post-paid, FOWLERS AND WELLS, Clinton Hall, No. 131 Nassau Street, New York.

"The Water Cure Journal holds a high rank in the science of health, always ready, straightforward and plain spoken, it unfolds the laws of our physical nature without any pretensions to the technicalities of science, but in a form as attractive and refreshing as the sparkling element of which it treats."—*New York Tribune.*

THE ILLUSTRATED AMERICAN PHRENOLOGICAL JOURNAL—Devoted to Perenology, Mechanism, Education, Agriculture, the Natural Sciences, and General Intelligence, profusely illustrated with Engravings. Every family, and especially all young men and women, should have a copy. Published monthly at One Dollar a year. All letters should be post-paid, and directed to FOWLERS AND WELLS,
Clinton Hall, No. 131 Nassau-st., New York.

Young men about launching forth upon the activities of life, and anxious to start right, and understand their course, will find this JOURNAL a friend and monitor, to encourage them in virtue, shield them from vice, and to prepare them for usefulness and success in life. The various occupations will be discussed in the light of Phrenology and Physiology, so that every one may know in what pursuit he would be most likely to succeed.—PUBLISHERS.
July, 1852—4t.

Garden and Field Seeds,

FROM the new establishment of VANZANDT & BOWDISH, No. 114 State street, Rochester, N. Y., can be purchased of the merchants generally throughout the country, in papers or packages, on reasonable terms. Also, at the Agricultural Warehouse of E. D. HALLOCK, No. 24 Exchange street, Rochester, N. Y.

The Seeds from this establishment can be relied on as being of the best quality. They are mostly imported, or grown for us by the *Eastern Shakers*, and are warranted good and true. Full directions for cultivation printed on each paper and package.

VANZANDT & BOWDISH.
Rochester, May 1, 1853.

Hickok's Patent Portable Cider Mill,

USED in various portions of the Union, (and conceded on all hands to be the best cider mill made,) took the following premiums in 1852:

Silver Medal at the fair of the American Institute, N. Y.
Premium at the fair of the Franklin Institute, Philadelphia.
First Premium at State fair at Utica, at the Columbia and Rensselear county fairs, and a *Diploma* at the Westchester fair.

The price of the mill is $40, free of freight or insurance.
Manufactured by W. O. HICKOK, Harrisburg, Pa.
Sold by HIGGINS & CALKINS, Castile Wyoming county.
C. E. YOUNG, 159 State street, Buffalo.
PROTY & CHEW, Geneva, N. Y.
See page 247 this Journal. [aug.—3t.]

Superphosphate of Lime,

IN BAGS and Barrels, made by C. R. DE BURG, with full directions for use,—warranted a pure and genuine article—for sale by GEO. DAVENPORT,
No. 5 Commercial, corner of Chatham street, Boston, Agent for the manufacturer.

Also, for sale, Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds, of reliable quality. [4-tf]

Hickok's Patent Improved Cider Mill and Press.

WE have been appointed sole agents for the sale of this mill and press in the city of New York. This is the most approved mill now in use. Catalogues with description and drawing will be forwarded by addressing us post-paid. Price $40. LONGETT & GRIFFING,
August 1, 1853.—2t. 25 Cliff street, New York.

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Suffolk and Essex Pigs,

PURE breed, for sale by EBEN WIGHT,
August 1, 1853.—3t. Dedham, Mass.

NO FAMILY SHOULD BE WITHOUT THEM.

WE speak of M'Lane's Liver Pills, which have become an indispensable family medicine. The frightful symptoms which arise from a diseased liver manifest themselves, more or less, in every family; dyspepsia, sick-headache, obstruction of the menses, ague and fever, pains in the side, with dry, hacking cough, are all the results of hepatic derangement—and for these Dr. M'Lane's Pills are a sovereign remedy. They have never been known to fail, and they should be kept at all times by families.

DIRECTIONS.—Take two or three on going to bed, every second or third night. If they do not purge two or three times by next morning, take one or two more. A *slight breakfast* should invariably follow their use.

The Liver Pill may also be used where purging is simply necessary. As an anti-bilious purgative, they are inferior to none. And in doses of two or three, they give astonishing relief to sick-headache; also in slight derangements of the stomach.

☞ Purchasers will be careful to ask for Dr. *M'Lane's Celebrated Liver Pills*, and take none else. There are other Pills, purporting to be Liver Pills, now before the public. Dr. M'Lane's Liver Pills, also his Celebrated Vermifuge, can now be had at all respectable Drug Stores in the United States and Canada.

The Practical and Scientific Farmer's own Paper

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

VOLUME XIV, FOR 1853.

Fifty Cents a Year, in Advance.

Five Copies for $2—Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

Subscription money, if properly enclosed, may be sent (post-paid or free) at the risk of the Publisher. Address to
DANIEL LEE,
November, 1852. *Rochester, N. Y.*

STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.